Pioneer sound.vision.soul

Service Manual

ORDER NO.
RRV3470

DVD/CD RECEIVER

XV-DV358

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Region No.	Remarks
XV-DV358	WYXJ5	AC 220 V to 240 V	2	

● **This service manual should be used together with the following manual(s):**

Model No.	Order No.	Remarks
XV-DV353/WYXJ5	RRV3370	

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
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1. CONTRAST OF MISCELLANEOUS PARTS

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on product are used for disassembly.*
- *Reference Nos. indicate the pages and Nos. in the service manual for the base model.*
- *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*

■ CONTRAST TABLE

XV-DV358/WYXJ5 and XV-DV353/WYXJ5 are constructed the same except for the following :

Ref. No.	Mark	Symbol and Description	Part No.		Remarks
			XV-DV353 /WYXJ5	XV-DV358 /WYXJ5	
		PACKING SECTION			
P7- 7		Operating instructions (Dutch/Italian/Spanish)	ARC7682	Not used	
P7- 8		Operating instructions (French/German)	ARC7692	Not used	
P7-11		Setup Guide (Dutch/Spanish)	ARC7671	Not used	
P7-12		Setup Guide (French)	ARC7690	Not used	
P7-13		Setup Guide (German/Italian)	ARC7669	Not used	
		Operating instructions (Swedish/Norwegian/Finnish/Danish)	Not used	ARC7720	
P7-23		Packing Case	AHD8413	AHD8504	
		EXTERIOR SECTION			
P9-19		Rear Panel	ANC8374	ANC8457	
P9-21		Front Panel Assy	AXG7286	AXG7328	
P9-24	NSP	Front Panel	AMB7910	AMB7952	
P9-29	NSP	Name Label	AAL7422	AAL7431	

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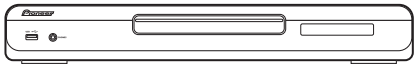
Service Manual



XV-DV353

ORDER NO.
RRV3370

DVD/CD RECEIVER

XV-DV353
XV-DV360

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Regional restriction codes (Region No.)	Remarks
XV-DV353	WYXJ5	AC220-240V	2	
XV-DV353	WVXJ5	AC220-240V	2	
XV-DV353	WXJ/RE5	AC220-240V	5	
XV-DV360	WYXJ5	AC220-240V	2	
XV-DV360	WVXJ5	AC220-240V	2	
XV-DV360	WXJ/RE5	AC220-240V	5	

For details, refer to "Important Check Points for Good Servicing".

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ⓒ**PIONEER CORPORATION 2006**

T-ZZK APR. 2006 printed in Japan

SAFETY INFORMATION

This service manual is intended for qualified service technicians ; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

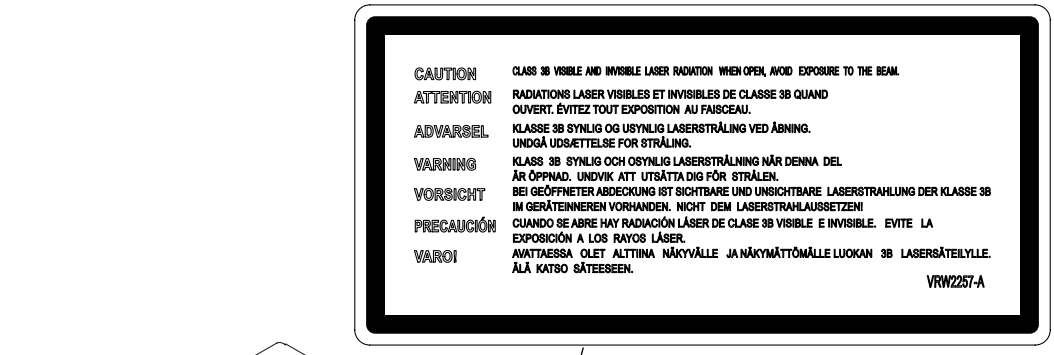
WARNING !

THE AEL (ACCESSIBLE EMISSION LEVEL) OF THE LASER POWER OUTPUT IS LESS THAN CLASS 1 BUT THE LASER COMPONENT IS CAPABLE OF EMITTING RADIATION EXCEEDING THE LIMIT FOR CLASS 1.
A SPECIALLY INSTRUCTED PERSON SHOULD DO SERVICING OPERATION OF THE APPARATUS.

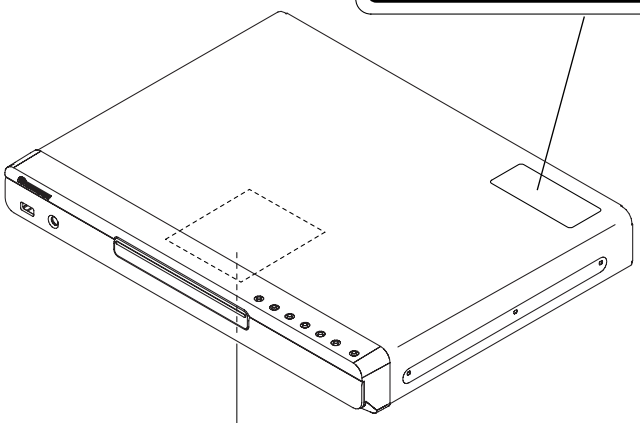
LASER DIODE CHARACTERISTICS

FOR DVD : MAXIMUM OUTPUT POWER : 5 mW
WAVELENGTH : 650 nm
FOR CD : MAXIMUM OUTPUT POWER : 7 mW
WAVELENGTH : 780 nm

LABEL CHECK


CAUTION
CLASS 3B VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN, AVOID EXPOSURE TO THE BEAM.
ATTENTION
RADIATIONS LASER VISIBLES ET INVISIBLES DE CLASSE 3B QUAND OUVERT. ÉVITEZ TOUT EXPOSITION AU FAISCEAU.
ADVARSEL
KLASSE 3B SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARNING
KLASS 3B SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. UNDVIK ATT UTSÄTTA DIG FÖR STRÅLEN.
VORSICHT
BEI GEÖFFNETER ABDECKUNG IST SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG DER KLASSE 3B IM GERÄTEINNEREN VORHANDEN. NICHT DEM LASERSTRAHLAUSSETZEN!
PRECAUCIÓN
CUANDO SE ABRE HAY RADIACIÓN LÁSER DE CLASE 3B VISIBLE E INVISIBLE. EVITE LA EXPOSICIÓN A LOS RAYOS LÁSER.
VARO!
AVATTAESSA OLET ALTTIINA NÄKYVÄLLE JA NÄKYMÄTTÖMÄLLE LUOKAN 3B LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VRW2257-A

VRW2257



Name Label

Additional Laser Caution

1. Laser Interlock Mechanism
   • Loading switch (S101 on the LOAB Assy) is used for interlock mechanism of the laser.
   When this switch turned ON in SW2 (CLOSE) side (OPEN signal is 0V and CLOSE signal is 3.5V), a laser becomes the status which can completely oscillation.
   Furthermore, the laser completely oscillates in the disc judgment and disc playback.
   When player is power ON state and laser diode is not completely oscillating, 780nm laser diode is always oscillating by half power.
   • Laser diode is driving with Q307 (650nm LD) and Q308 (780nm LD) on the DVD MAIN Assy.
   Therefore, when short-circuit between the emitter and collector of these transistors or the base voltage is supplied for transistors turn on, the laser oscillates. (failure mode)
   • In the test mode ∗ , there is the mode that the laser oscillates except for the disc judgment and playback. LD ON mode in the test mode oscillates with the laser forcibly.
   The interlock mechanism mentioned above becomes invalid in this mode.

2. When the cover is open, close viewing through the objective lens with the naked eye will cause exposure to the laser beam.

∗ : Refer to page 67.

[Important Check Points for Good Servicing]

In this manual, procedures that must be performed during repairs are marked with the below symbol.
Please be sure to confirm and follow these procedures.

1. Product safety

Please conform to product regulations (such as safety and radiation regulations), and maintain a safe servicing environment by following the safety instructions described in this manual.

① Use specified parts for repair.

Use genuine parts. Be sure to use important parts for safety.

② Do not perform modifications without proper instructions.

Please follow the specified safety methods when modification(addition/change of parts) is required due to interferences such as radio/TV interference and foreign noise.

③ Make sure the soldering of repaired locations is properly performed.

When you solder while repairing, please be sure that there are no cold solder and other debris.
Soldering should be finished with the proper quantity. (Refer to the example)

④ Make sure the screws are tightly fastened.

Please be sure that all screws are fastened, and that there are no loose screws.

⑤ Make sure each connectors are correctly inserted.

Please be sure that all connectors are inserted, and that there are no imperfect insertion.

⑥ Make sure the wiring cables are set to their original state.

Please replace the wiring and cables to the original state after repairs.
In addition, be sure that there are no pinched wires, etc.

⑦ Make sure screws and soldering scraps do not remain inside the product.

Please check that neither solder debris nor screws remain inside the product.

⑧ There should be no semi-broken wires, scratches, melting, etc. on the coating of the power cord.

Damaged power cords may lead to fire accidents, so please be sure that there are no damages.
If you find a damaged power cord, please exchange it with a suitable one.

⑨ There should be no spark traces or similar marks on the power plug.

When spark traces or similar marks are found on the power supply plug, please check the connection and advise on secure connections and suitable usage. Please exchange the power cord if necessary.

⑩ Safe environment should be secured during servicing.

When you perform repairs, please pay attention to static electricity, furniture, household articles, etc. in order to prevent injuries.
Please pay attention to your surroundings and repair safely.

2. Adjustments

To keep the original performance of the products, optimum adjustments and confirmation of characteristics within specification.
Adjustments should be performed in accordance with the procedures/instructions described in this manual.

3. Lubricants, Glues, and Replacement parts

Use grease and adhesives that are equal to the specified substance.
Make sure the proper amount is applied.

4. Cleaning

For parts that require cleaning, such as optical pickups, tape deck heads, lenses and mirrors used in projection monitors, proper cleaning should be performed to restore their performances.

5. Shipping mode and Shipping screws

To protect products from damages or failures during transit, the shipping mode should be set or the shipping screws should be installed before shipment. Please be sure to follow this method especially if it is specified in this manual.

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1. SPECIFICATIONS

- **Amplifier section**

RMS Power Output:
Front, Center, Surround. . . . 60 W per channel (1 kHz, 10 % T.H.D., 4 Ω)
Subwoofer . . . 60 W (100 Hz, 10 % T.H.D., 4 Ω)

- **Disc section**

Digital audio characteristics . . . . . DVD fs: 96 kHz, 24-bit
Type. . . . . DVD system, Video CD/Super VCD system and Compact Disc digital audio system
Frequency response. . . . 4 Hz to 44 kHz (96kHz sampling) / 4 Hz to 22 kHz (48kHz sampling)
Wow and Flutter . . . . . Limit of measurement (±0.001 % W.PEAK) or less (JEITA)

- **FM tuner section**

Frequency range. . . . . 87.5 MHz to 108 MHz
Antenna. . . . . 75 Ω, unbalanced

- **AM tuner section**

Frequency range:
With 9kHz step . . . . . 531 kHz to 1602 kHz
Antenna. . . . . Loop antenna

- **Miscellaneous**

Power requirements: AC 220V to 240 V, 50 Hz / 60 Hz
Power consumption. . . . . 44 W
Power consumption in standby. . . . . 0.36 W
Dimensions . . . . . .420 (W) mm x 60 (H) mm x 330 (D) mm
Weight . . . . . 3.1 kg

- **Accessories (DVD/CD receiver)**

Remote control 1
AA/R6 dry cell batteries. . . . . 2 (to confirm system operation)
Video cable (yellow plugs). 1
AM loop antenna 1
FM antenna 1
Power cord 1
Warranty card 1
Setup Guide
Operating instructions

Disc / content format playback compatibility

This player is compatible with a wide range of disc types (media) and formats. Playable discs will generally feature one of the following logos on the disc and/or disc packaging. Note however that some disc types, such as recordable CD and DVD, may be in an unplayable format.

See the Disc compatibility table below for more information.

DVD-Video DVD-R DVD-RW

Audio CD Video CD CD-R CD-RW

Fujicolor CD

- This unit will play DVD+R/+RW discs.
- is a trademark of Fuji Photo Film Co. Ltd.
- is a trademark of DVD Format/Logo Licensing Corporation
- Also compatible with KODAK Picture CD

This player supports the IECís Super VCD standard for superior picture quality, dual soundtracks, and widescreen support.

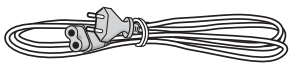
Super Video CD (Super VCD)

Manufactured under license from Dolby Laboratories.“Dolby”, “Pro Logic” and the double-D symbol are trademarks of Dolby Laboratories.

“DTS” and “DTS Digital Surround” are registered trademarks of Digital Theater Systems, Inc.

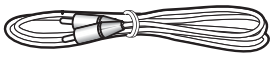
● Accessories

- Power cord (WYXJ5, WXJ/RE5 : ADG1127)

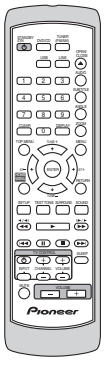


- FM Antenna (ADH7030)

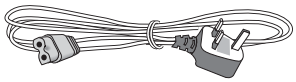
- Video Cable (L = 1.5 m) (XDE3046)



- Remote Control (AXD7440)



- Power cord (WVXJ5 : ADG7108)



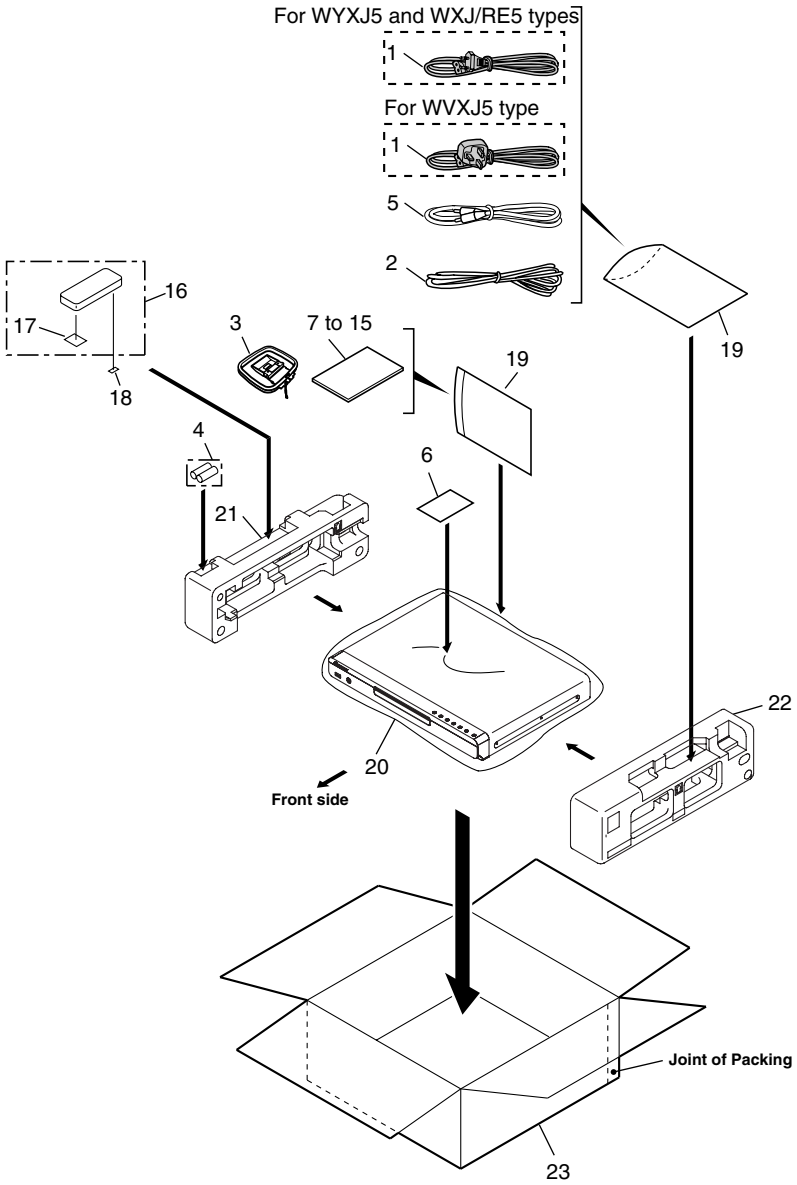
- AM Loop Antenna (ATB7013)

- AA size IEC R6 dry cell batteries

2. EXPLODED VIEWS AND PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on product are used for disassembly.*
- *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*

2.1 PACKING



(1) PACKING SECTION PARTS LIST

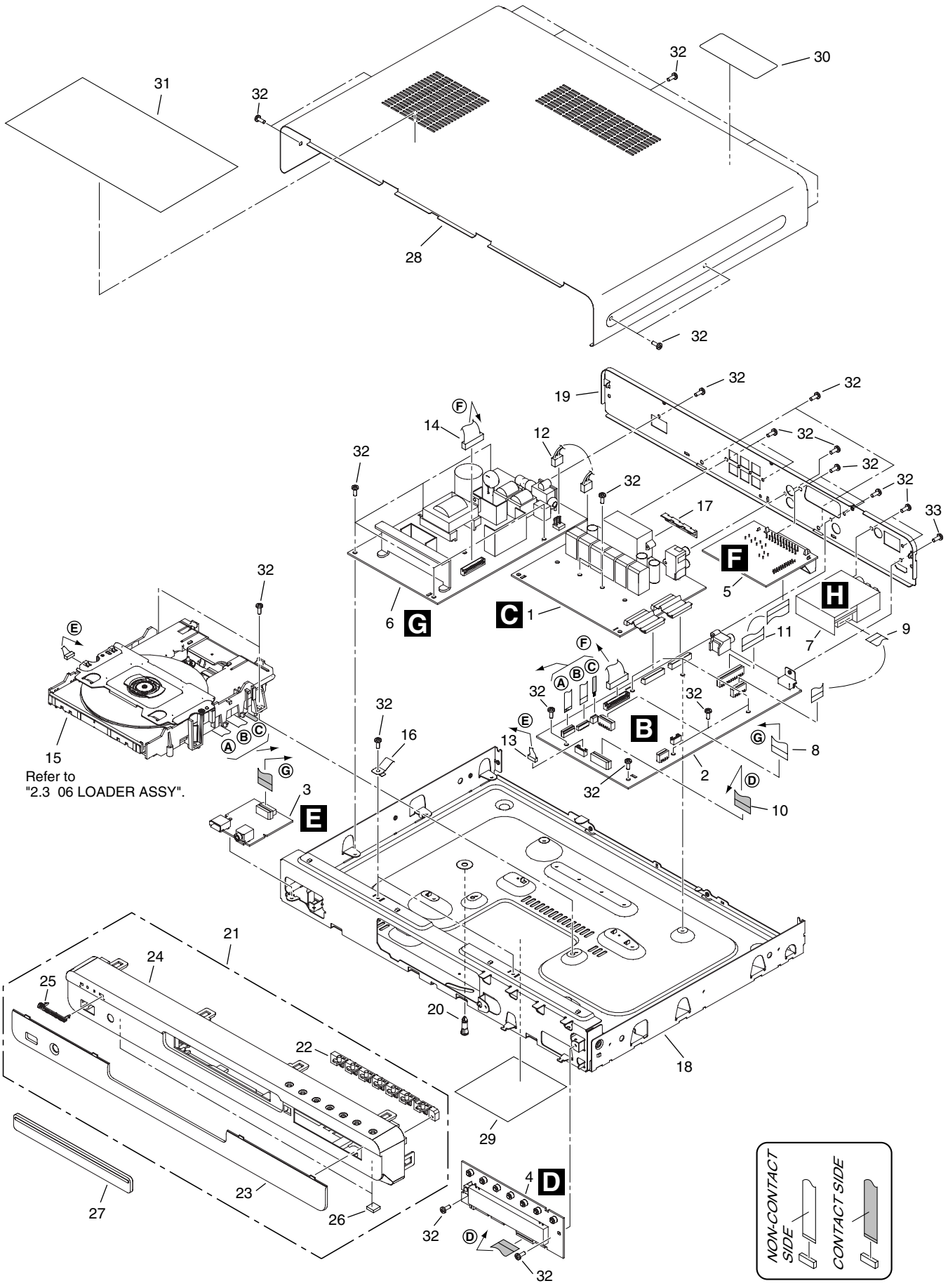
Mark	No.	Description	Part No.
⚠	1	AC Power Cord	See Contrast table(2)
	2	FM Antenna	ADH7030
	3	AM Loop Antenna	ATB7013
NSP	4	Dry Cell Battery (AA/R6)	XEX3002
	5	Video Cable	XDE3046
NSP	6	Warranty Card	ARY7065
	7	Operating Instructions (Dutch/Italian/Spanish)	See Contrast table(2)
	8	Operating Instructions (French/German)	See Contrast table(2)
	9	Operating Instructions (Russian)	See Contrast table(2)
	10	Operating Instructions (English)	See Contrast table(2)
	11	Setup Guide (Dutch/Spanish)	See Contrast table(2)
	12	Setup Guide (French)	See Contrast table(2)
	13	Setup Guide (German/Italian)	See Contrast table(2)
	14	Setup Guide (Russian)	See Contrast table(2)
	15	Setup Guide (English)	See Contrast table(2)
	16	Remote Control	AXD7440
	17	Battery Cover	AZN8018
	18	Label(WEEE)	ARW7322
NSP	19	Polyethylene Bag	AHG7117
	20	Packing Sheet	AHG7053
	21	Pad L	AHA7454
	22	Pad R	AHA7455
	23	Packing Case	See Contrast table(2)

(2) CONTRAST TABLE

XV-DV353/WYXJ5, /WVXJ5, /WXJ/RE5, XV-DV360/WYXJ5, /WVXJ5 and /WXJ/RE5 are constructed the same except for the following :

Mark	No.	Symbol and Description	XV-DV353 /WYXJ5	XV-DV353 /WVXJ5	XV-DV353 /WXJ/RE5	XV-DV360 /WYXJ5	XV-DV360 /WVXJ5	XV-DV360 /WXJ/RE5
⚠	1	AC Power Cord	ADG1127	ADG7108	ADG1127	ADG1127	ADG7108	ADG1127
	7	Operating Instructions (Dutch/Italian/Spanish)	ARC7682	Not used	Not used	ARC7682	Not used	Not used
	8	Operating Instructions (French/German)	ARC7692	Not used	Not used	ARC7692	Not used	Not used
	9	Operating Instructions (Russian)	Not used	Not used	ARC7689	Not used	Not used	ARC7689
	10	Operating Instructions (English)	Not used	ARB7352	Not used	Not used	ARB7352	Not used
	11	Setup Guide (Dutch/Spanish)	ARC7671	Not used	Not used	ARC7672	Not used	Not used
	12	Setup Guide (French)	ARC7690	Not used	Not used	ARC7691	Not used	Not used
	13	Setup Guide (German/Italian)	ARC7669	Not used	Not used	ARC7670	Not used	Not used
	14	Setup Guide (Russian)	Not used	Not used	ARC7680	Not used	Not used	ARC7681
	15	Setup Guide (English)	Not used	ARB7349	Not used	Not used	ARB7350	Not used
	23	Packing Case	AHD8413	AHD8413	AHD8454	AHD8455	AHD8455	AHD8456

2.2 EXTERIOR SECTION



(1) EXTERIOR SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	DAMP ASSY	AWK7931
	2	DVD MAIN ASSY	See Contrast table(2)
	3	USB ASSY	AWU8290
	4	DISPLAY ASSY	AWU8289
	5	EUROSCART ASSY	AWU8291
⚠	6	POWER SUPPLY UNIT	AWR7041
	7	FM/AM TUNER UNIT	AXX7170
	8	11P FFC/60V	ADD7542
	9	11P FFC/60V	ADD7543
	10	13P FFC/60V	ADD7541
	11	23P FFC/60V	ADD7544
	12	2P Housing Wire Assy	ADX7480
	13	CONNECTOR ASSY	PF05PP-B40
	14	CONNECTOR ASSY	PG13KK-F22
NSP	15	06 Loader Assy	VWT1226
	16	Earth Spring W5.1	ABH7240
	17	Gnd Plate W5.1	ABH7241
NSP	18	Chassis	ANA7187
	19	Rear Panel	See Contrast table(2)
	20	Locking Card Spacer	AEC7372
	21	Front Panel Assy	See Contrast table(2)
NSP	22	Button	AAD7753
NSP	23	Display Window	AAK8327
NSP	24	Front Panel	See Contrast table(2)
	25	Pioneer Name Plate	VAM1129
	26	Rubber Foot	VEB1325
	27	Tray Panel	AAK8329
	28	Bonnet	AZN8017
NSP	29	Name Label	See Contrast table(2)
	30	Laser Caution	VRW2257
NSP	31	Getter	See Contrast table(2)
	32	Screw	BBZ30P080FNI
	33	Screw	BSZ30P060FTC

(2) CONTRAST TABLE

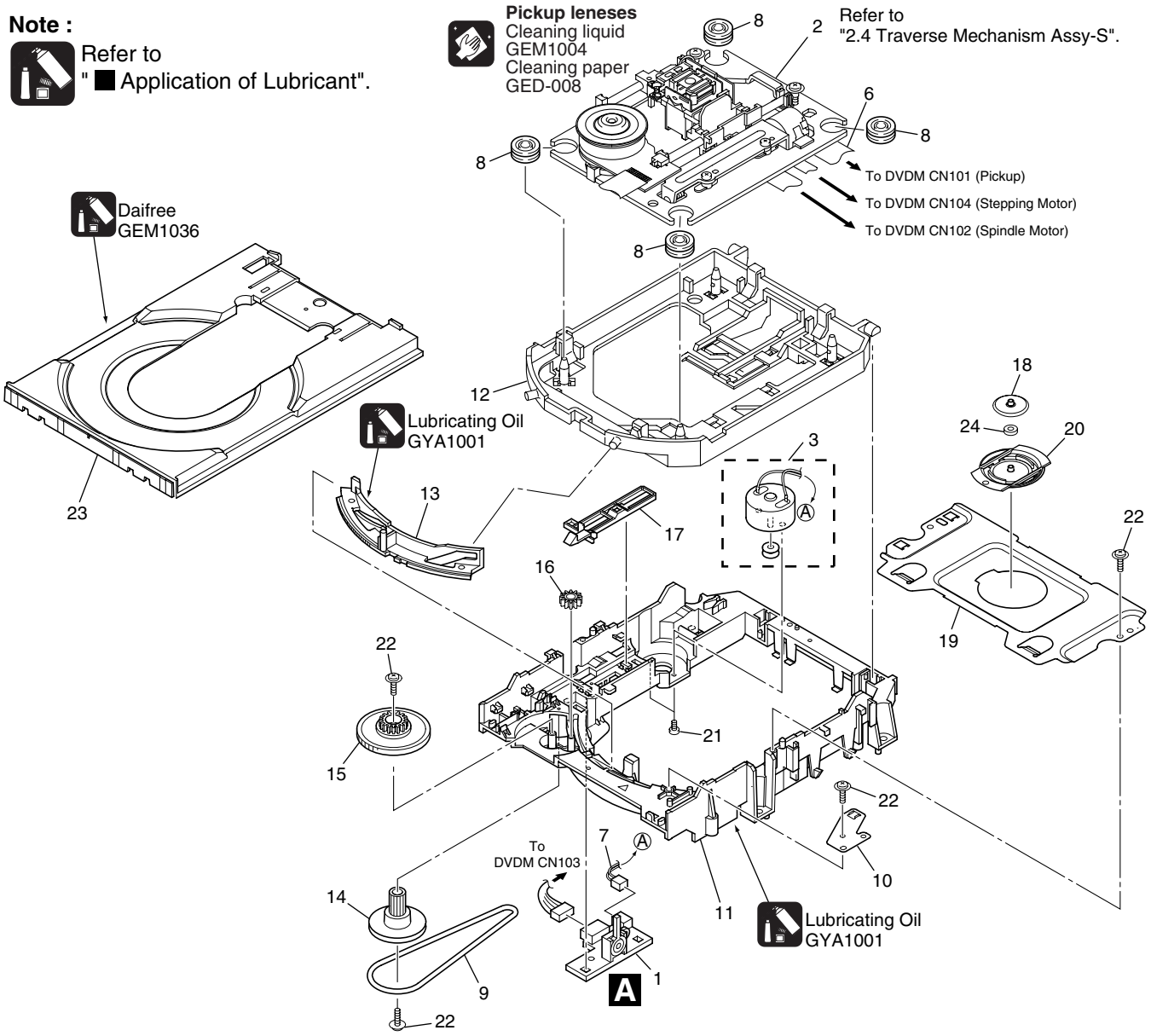
XV-DV353/WYXJ5, /WVXJ5, WXJ/RE5, XV-DV360/WYXJ5, /WVXJ5 and /WXJ/RE5 are constructed the same except for the following :

Mark	No.	Symbol and Description	XV-DV353 /WYXJ5	XV-DV353 /WVXJ5	XV-DV353 /WXJ/RE5	XV-DV360 /WYXJ5	XV-DV360 /WVXJ5	XV-DV360 /WXJ/RE5
	2	DVD MAIN ASSY	AWM8025	AWM8025	AWM8025	AWM8026	AWM8026	AWM8026
	19	Rear Panel	ANC8374	ANC8374	ANC8399	ANC8400	ANC8400	ANC8401
	21	Front Panel Assy	AXG7286	AXG7286	AXG7286	AXG7294	AXG7294	AXG7294
NSP	24	Front Panel	AMB7910	AMB7910	AMB7910	AMB7931	AMB7931	AMB7931
NSP	29	Name Label	AAL7422	AAL7422	AAL7422	AAL7423	AAL7423	AAL7423
NSP	31	Getter	AAX8103	AAX8103	AAX8110	AAX8111	AAX8111	AAX8112

2.3 06 LOADER ASSY

Note :

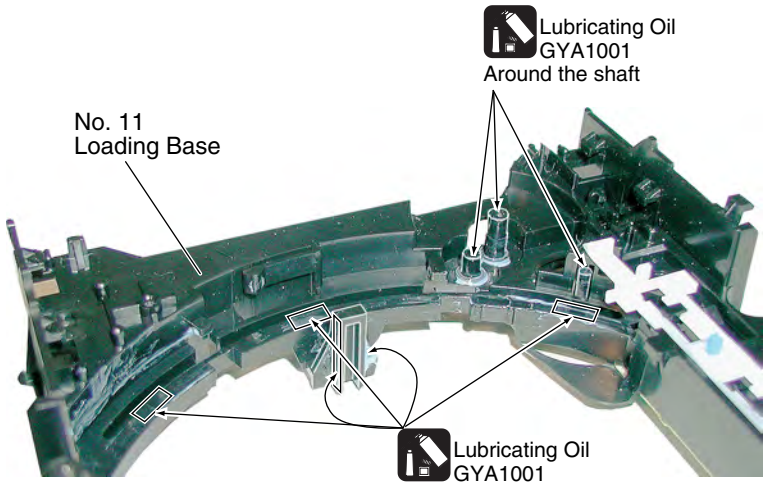
Refer to
" ■ Application of Lubricant".

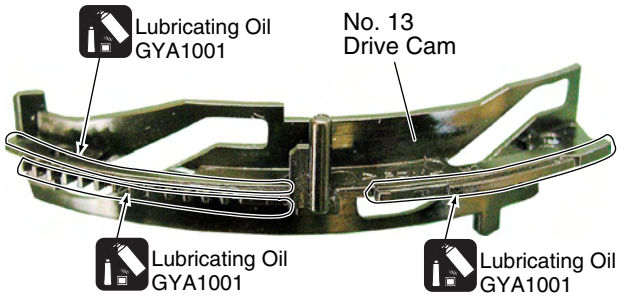


06 LOADER ASSY PARTS LIST

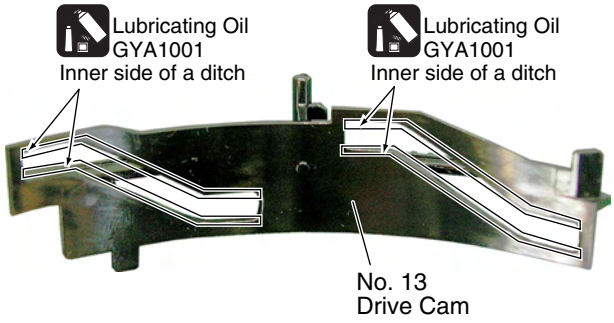
Mark	No.	Description	Part No.
NSP	1	LOAB Assy	VWG2346
	2	Traverse Mechanism Assy-S	DXX2575
	3	Loading Motor Assy	VXX2912
	4	• • • • •	
	5	• • • • •	
	6	Flexible Cable (24P)	ADD7545
	7	Connector Assy 2P	VKP2253
	8	Floating Rubber	VEB1351
	9	Belt	VEB1358
	10	Stabilizer	VNE2253
	11	Loading Base	VNL1917
	12	Float Base 04	VNL1968
	13	Drive Cam	VNL1919
	14	Gear Pulley	VNL1921
	15	Loading Gear	VNL1922
	16	Drive Gear	VNL1923
	17	SW Lever	VNL1925
	18	Clamper Plate 04	VNE2342
	19	Bridge 04	VNE2343
	20	Clamper 04	VNL1969
	21	Screw	JGZ17P028FTC
	22	Screw	VBA1094
	23	Tray	VNL1920
	24	Clamp Magnet	VMG1029

Application of Lubricant

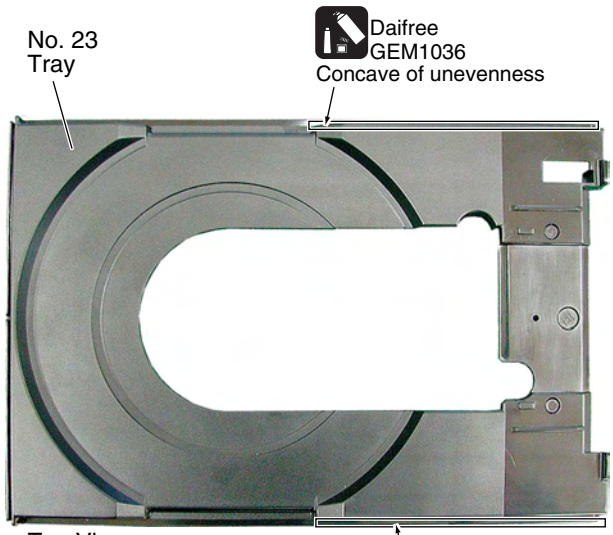




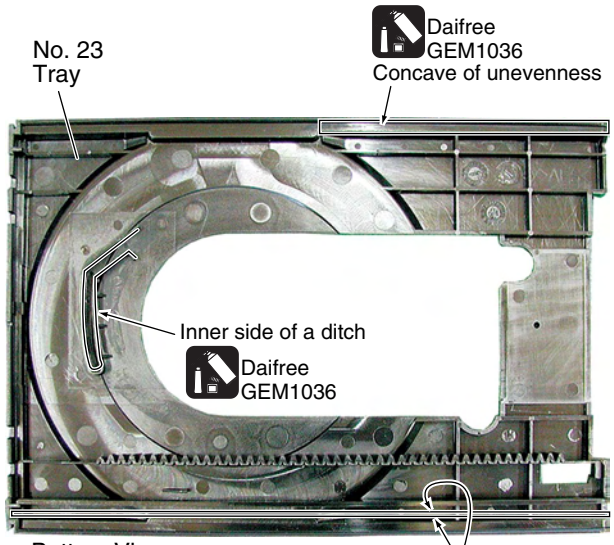
● Front View



● Rear View



● Top View

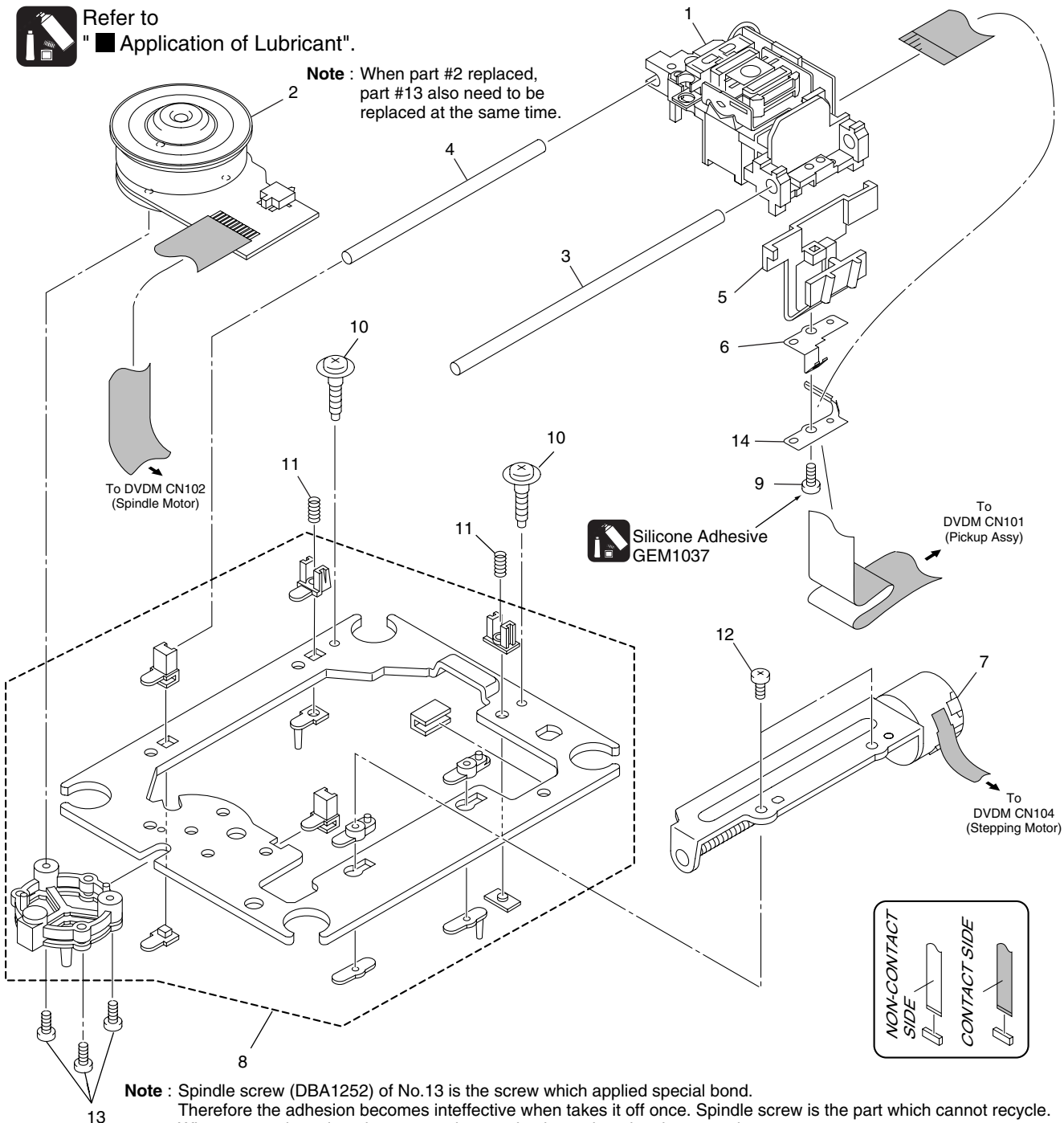


● Bottom View

2.4 TRAVERSE MECHANISM ASSY-S

Note :

Refer to
" ■ Application of Lubricant".



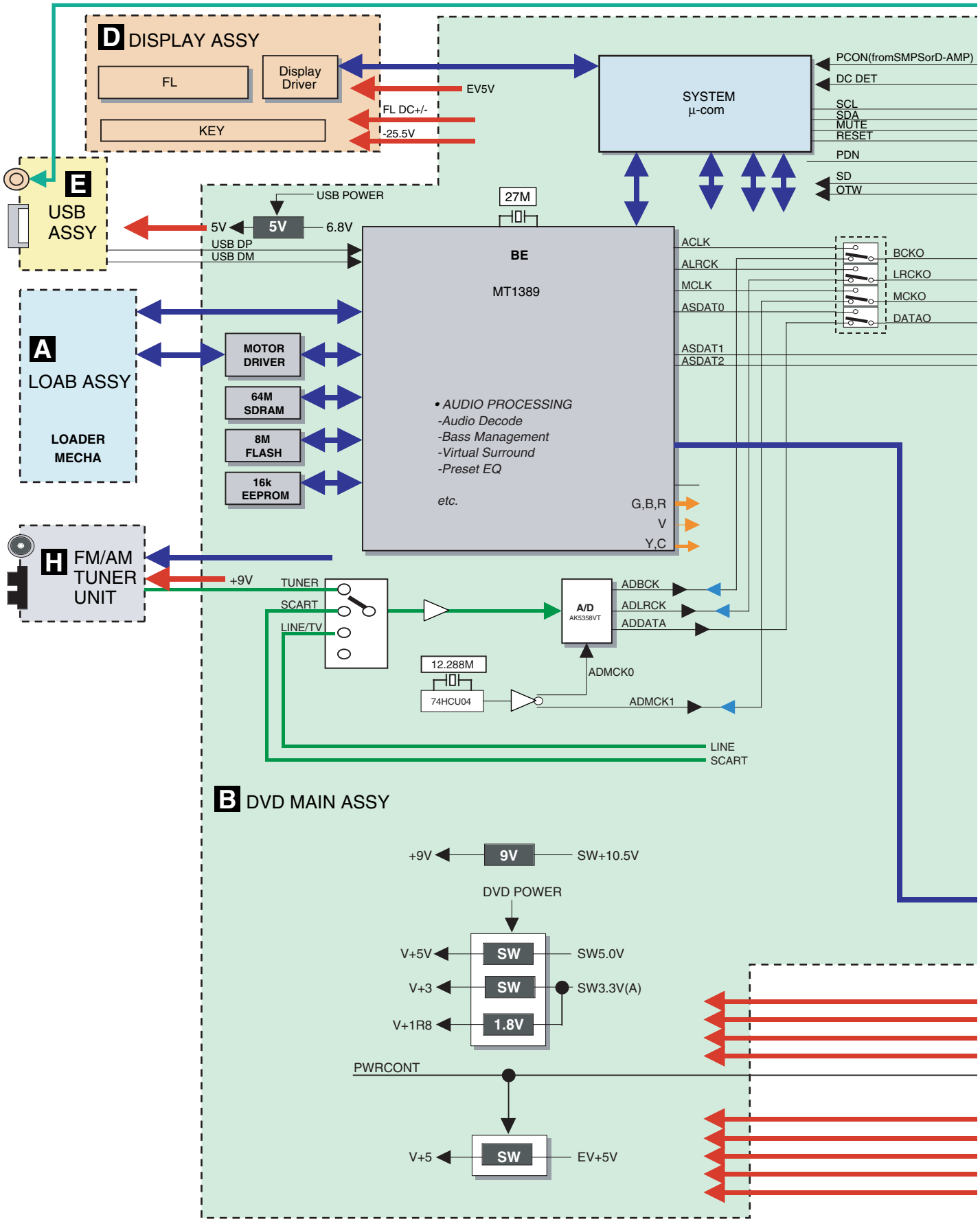
Note : Spindle screw (DBA1252) of No.13 is the screw which applied special bond.
Therefore the adhesion becomes inteffective when takes it off once. Spindle screw is the part which cannot recycle.
When part #2 is replaced, part #13 also need to be replaced at the same time.

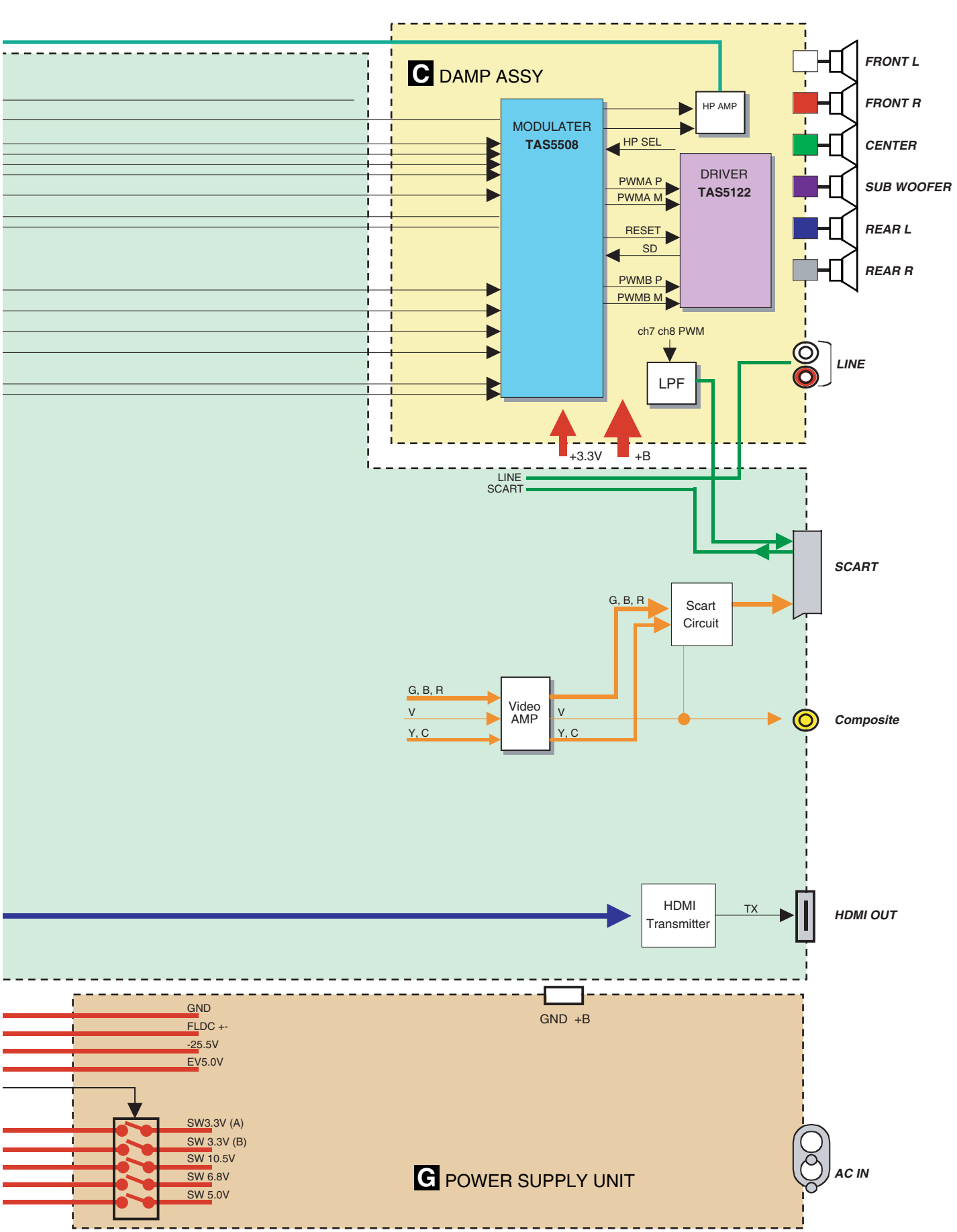
TRAVERSE MECHANISM ASSY-S PARTS LIST

Mark	No.	Description	Part No.
⚠	1	06SD Pickup Assy	OXX8020
	2	Spindle Motor N200	DXM1197
	3	Guide Shaft VK1	DLA1940
	4	Sub Guide Shaft VK1	DLA1941
NSP	5	Joint VK1B	DNK4272
	6	Joint Spring VK1	DBK1235
	7	Stepping Motor VK1	DXM1201
NSP	8	Mechanism Frame VK1	DNK4160
	9	Precision Screw VK1	DBA1209
	10	Skew Screw VK1	DBA1211
	11	Skew Spring VK1	DBH1516
NSP	12	Stepping Screw	DBA1205
	13	Spindle Screw VK1(for Service)	DBA1252
NSP	14	Hold Spring	DBK1297

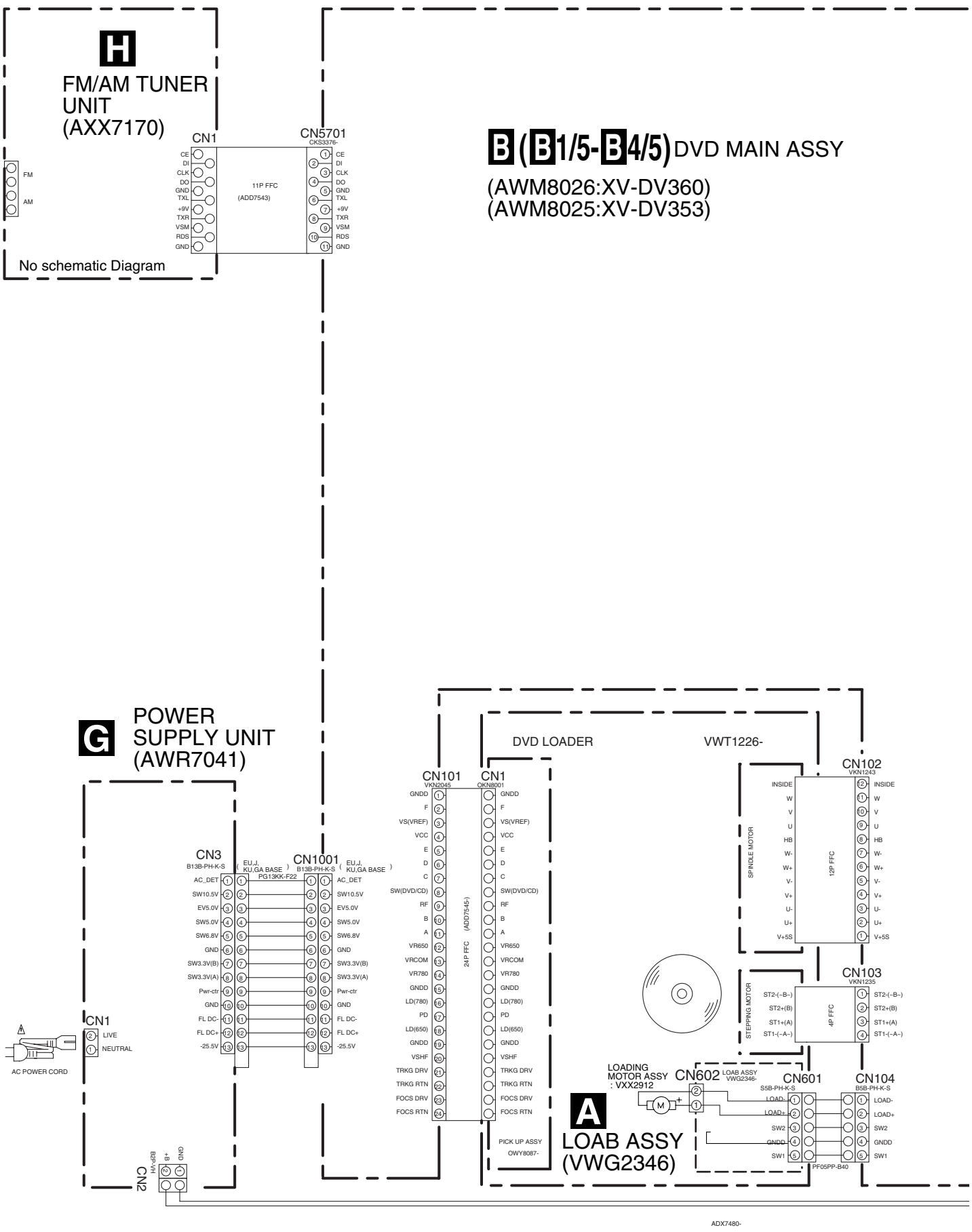
3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

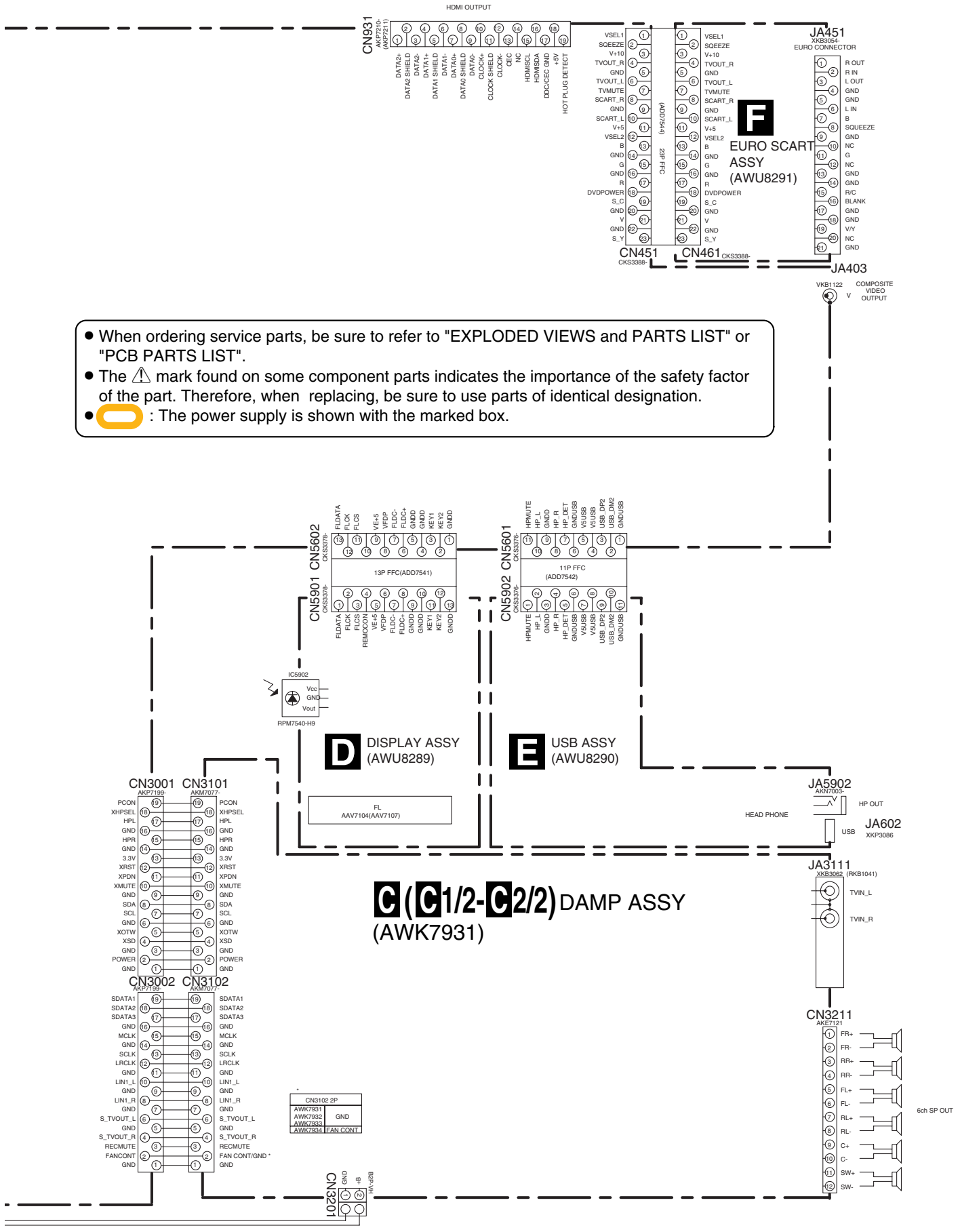
3.1 BLOCK DIAGRAM




C DAMP ASSY
MODULATER
TAS5508
HP AMP
HP SEL
DRIVER
TAS5122
PWMA P
PWMA M
RESET
SD
PWMB P
PWMB M
ch7 ch8 PWM
LPF
+3.3V
+B
FRONT L
FRONT R
CENTER
SUB WOOFER
REAR L
REAR R
LINE
LINE
SCART
SCART
G, B, R
Scart
Circuit
G, B, R
V
Y, C
Video
AMP
V
Y, C
Composite
HDMI
Transmitter
TX
HDMI OUT
GND
FLDC +-
-25.5V
EV5.0V
GND +B
SW3.3V (A)
SW 3.3V (B)
SW 10.5V
SW 6.8V
SW 5.0V
G POWER SUPPLY UNIT
AC IN

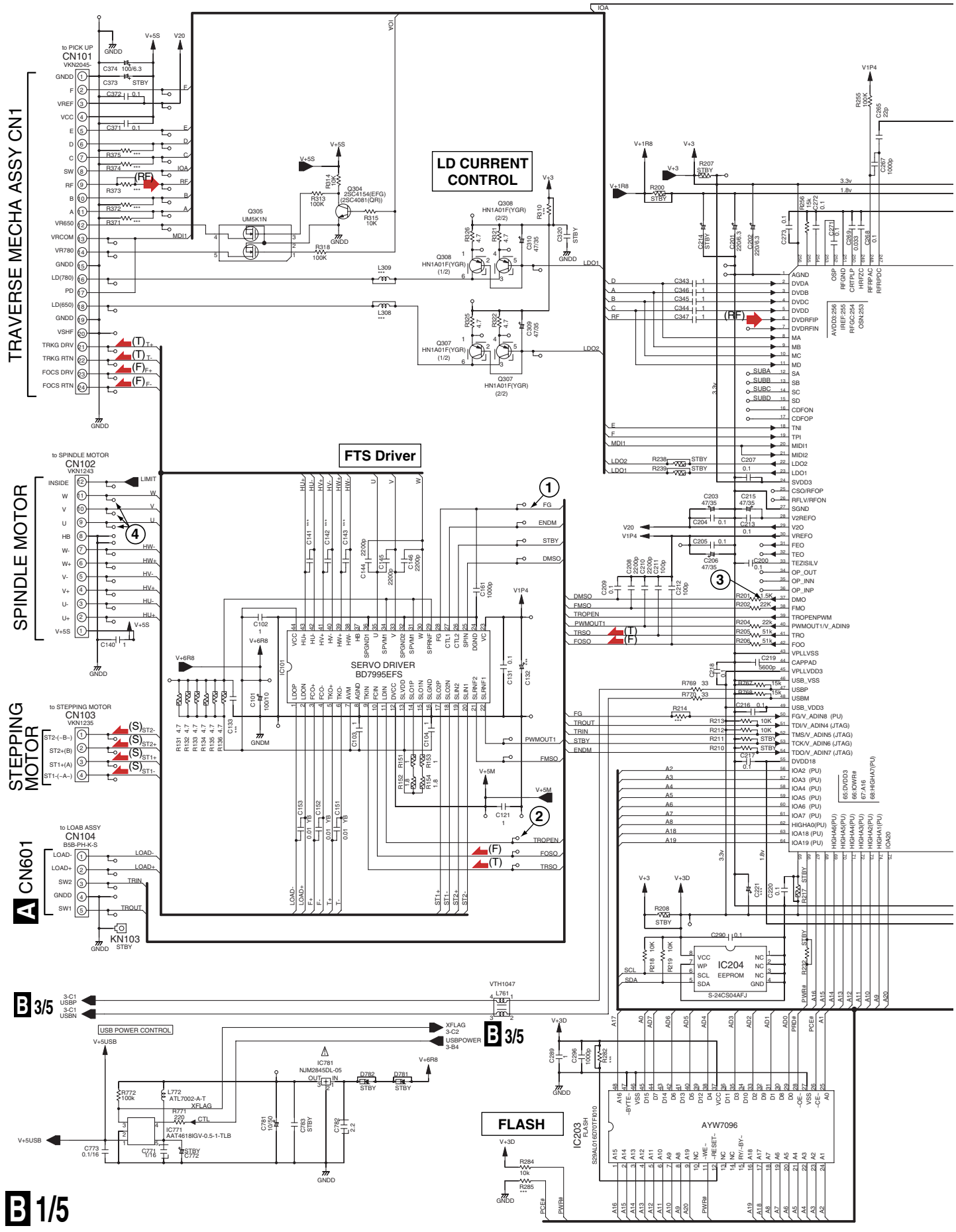
3.2 LOAB ASSY and OVERALL WIRING CONNECTION DIAGRAM

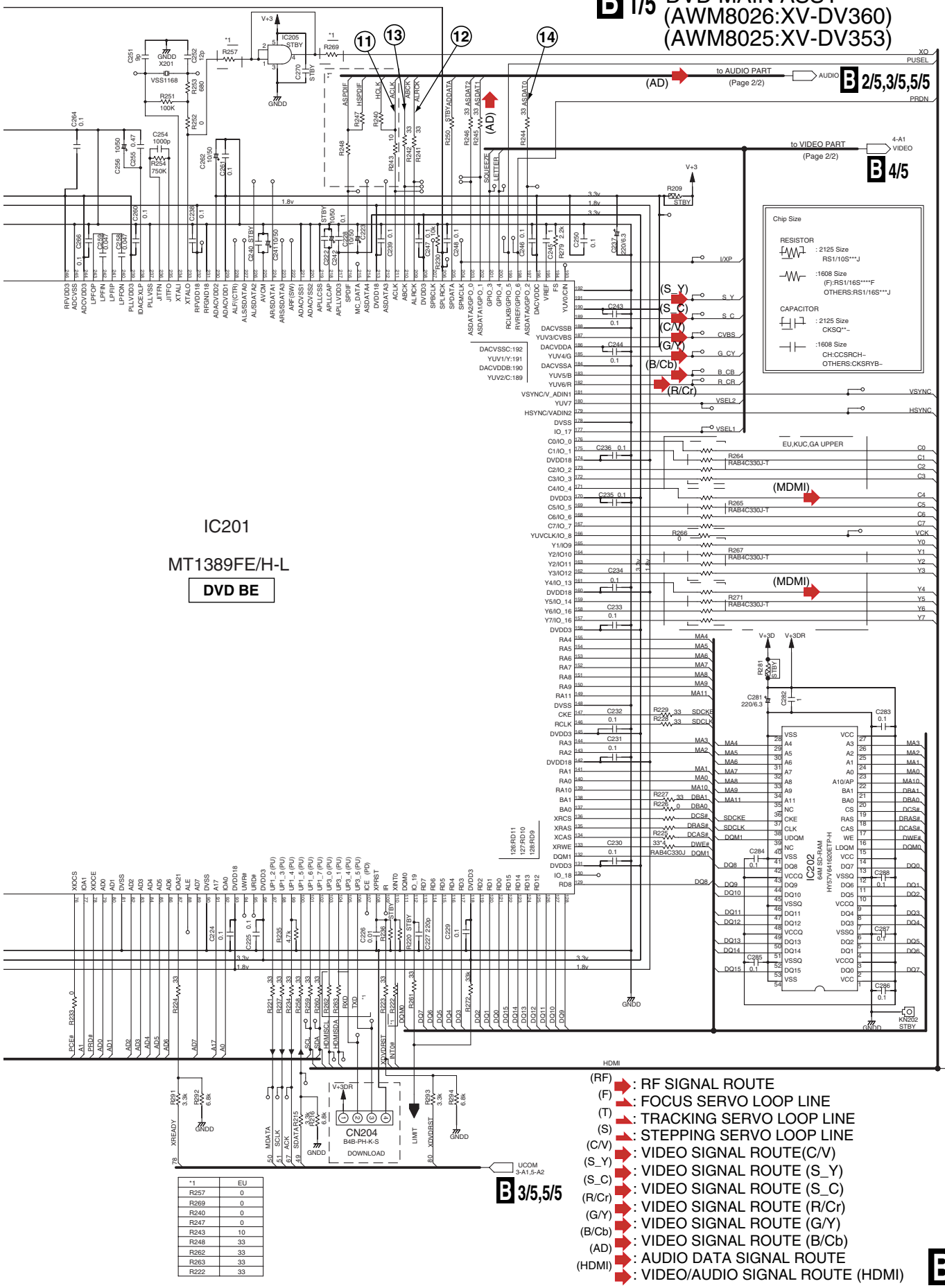




- When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- : The power supply is shown with the marked box.

3.3 DVD MAIN ASSY (1/5)



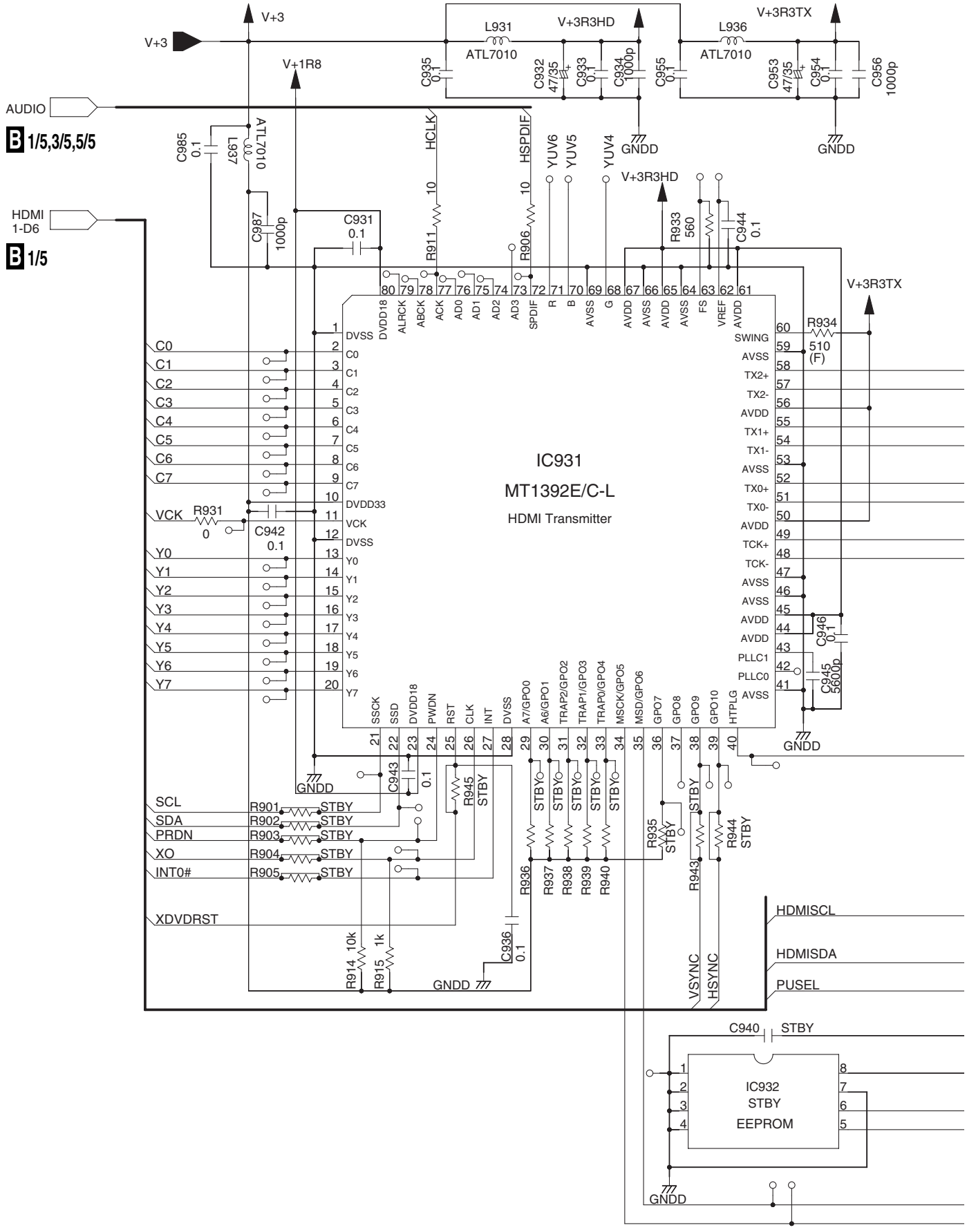


*1	EU
R257	0
R269	0
R240	0
R247	0
R243	10
R248	33
R262	33
R263	33
R222	33

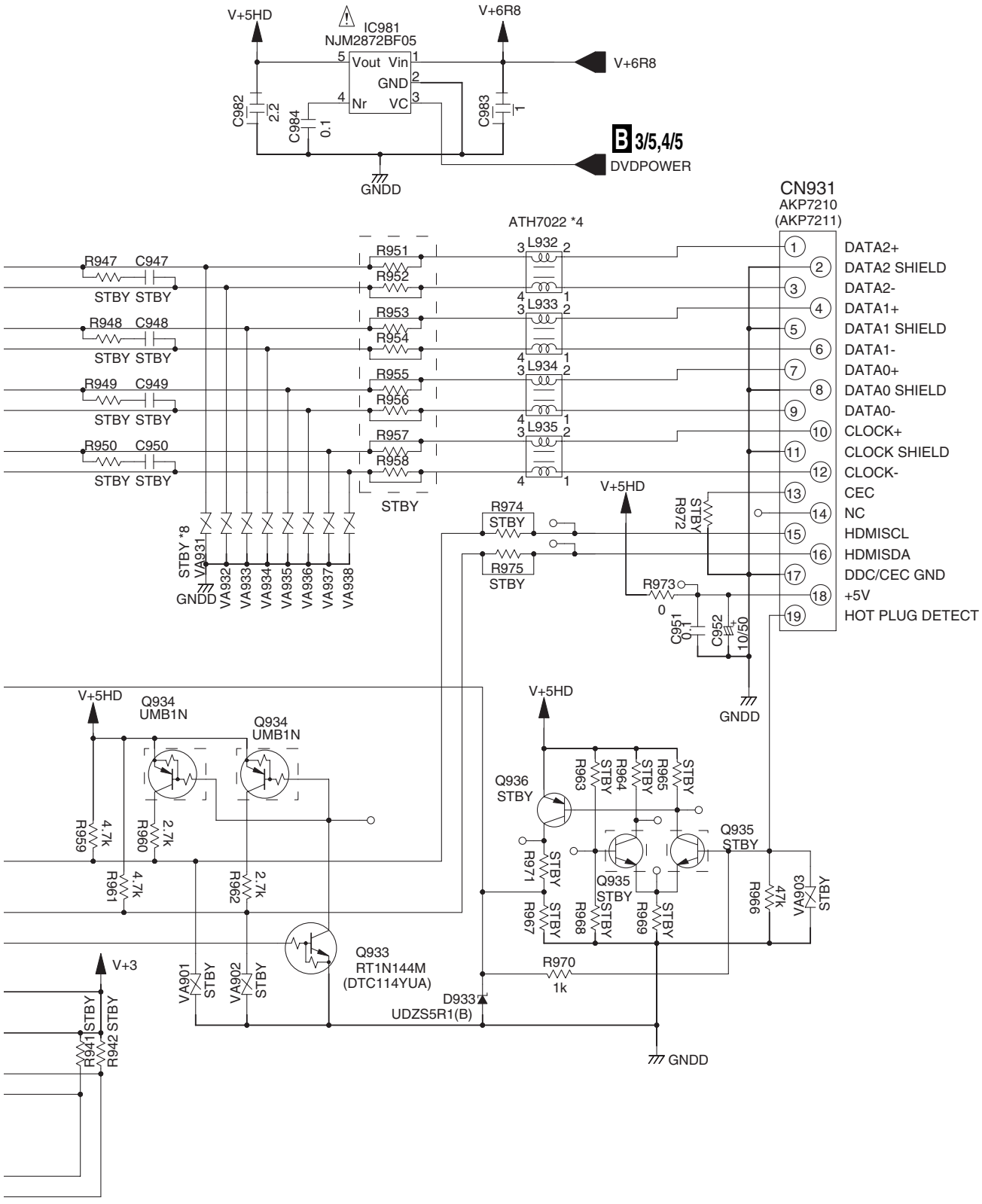
(RF) : RF SIGNAL ROUTE
(F) : FOCUS SERVO LOOP LINE
(T) : TRACKING SERVO LOOP LINE
(S) : STEPPING SERVO LOOP LINE
(C/V) : VIDEO SIGNAL ROUTE(C/V)
(S_Y) : VIDEO SIGNAL ROUTE (S_Y)
(S_C) : VIDEO SIGNAL ROUTE (S_C)
(R/Cr) : VIDEO SIGNAL ROUTE (R/Cr)
(G/Y) : VIDEO SIGNAL ROUTE (G/Y)
(B/Cb) : VIDEO SIGNAL ROUTE (B/Cb)
(AD) : AUDIO DATA SIGNAL ROUTE
(HDMI) : VIDEO/AUDIO SIGNAL ROUTE (HDMI)

B 1/5

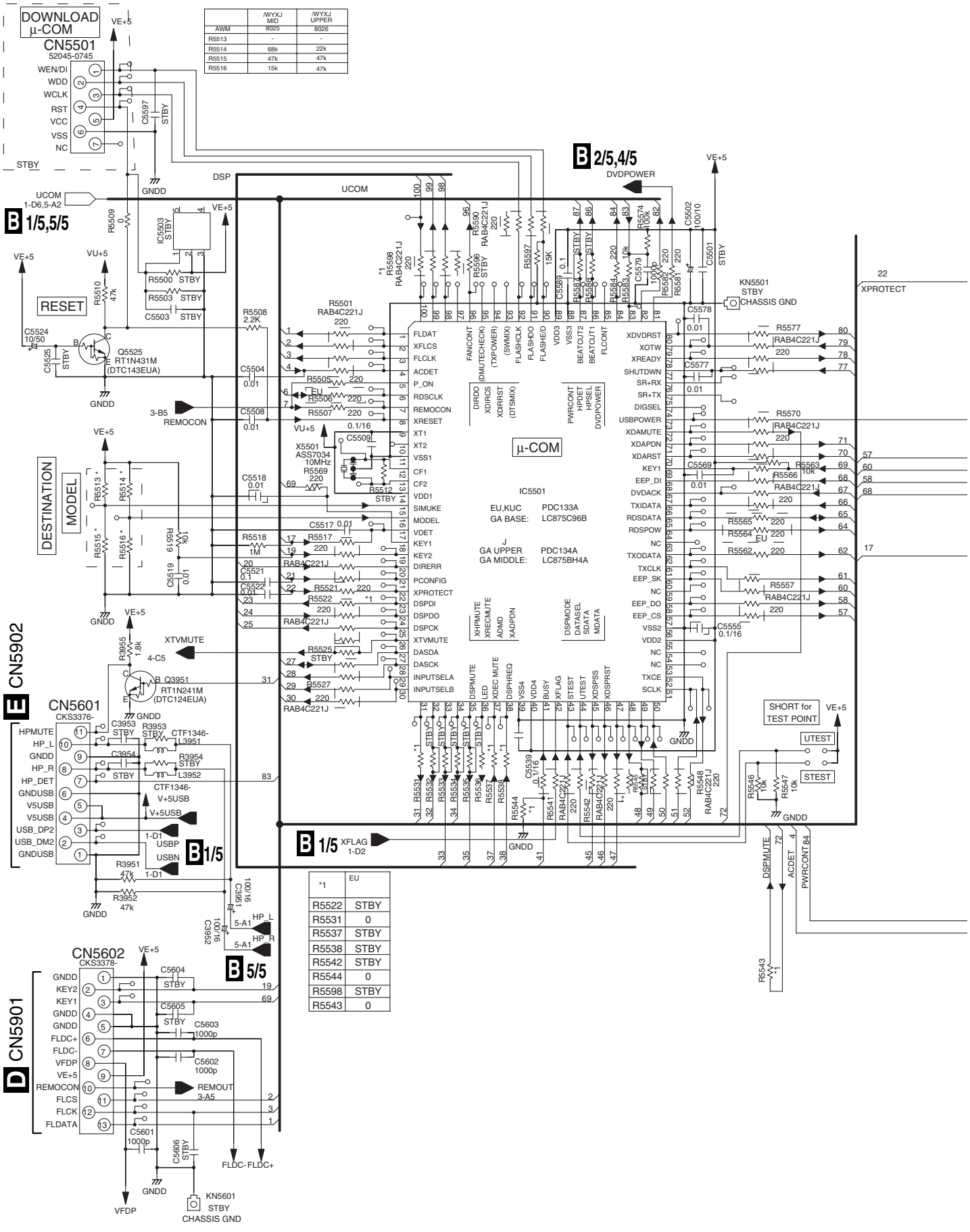
3.4 DVD MAIN ASSY (2/5)



B 2/5 DVD MAIN ASSY
(AWM8026:XV-DV360)
(AWM8025:XV-DV353)



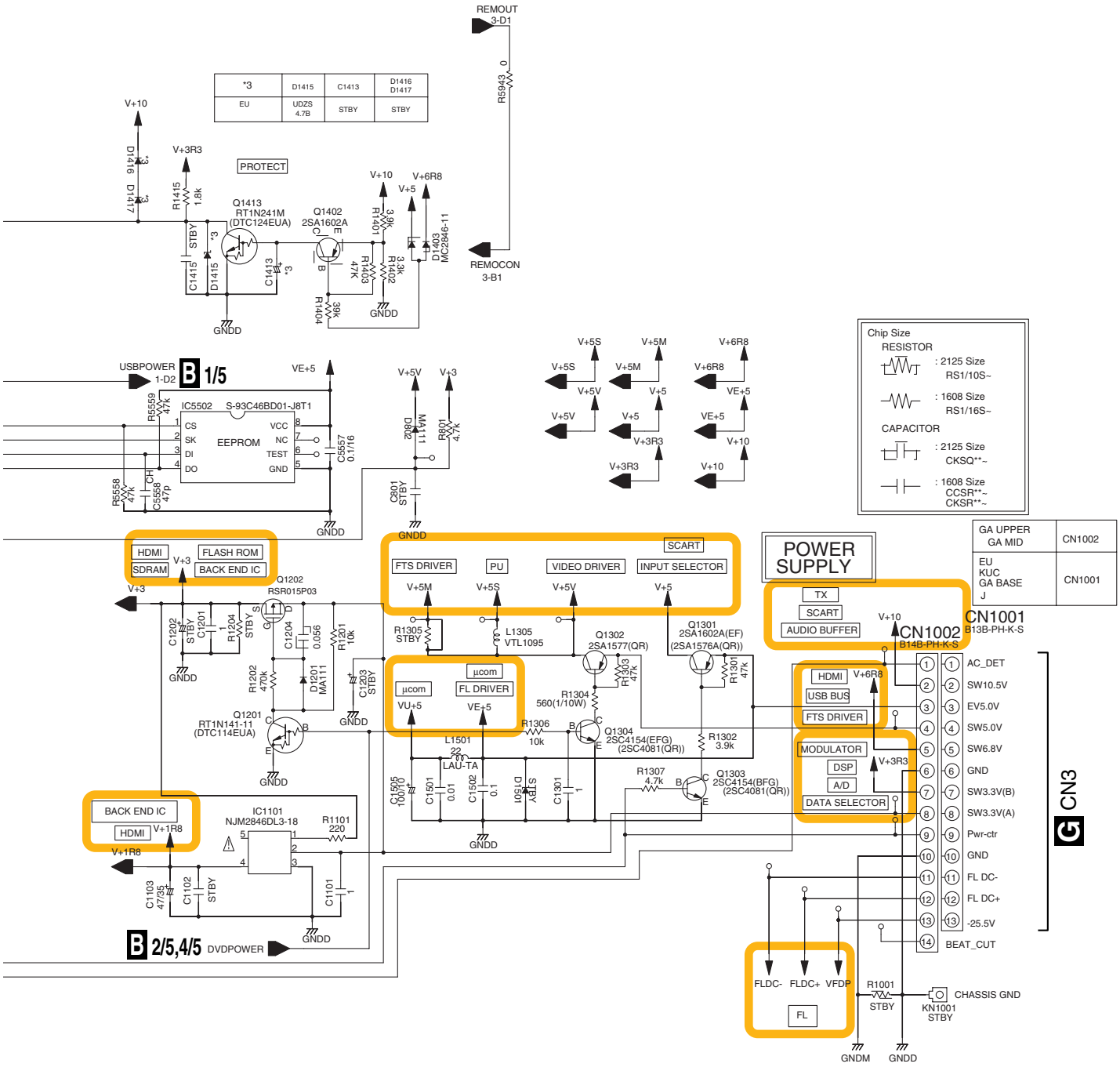
3.5 DVD MAIN ASSY (3/5)



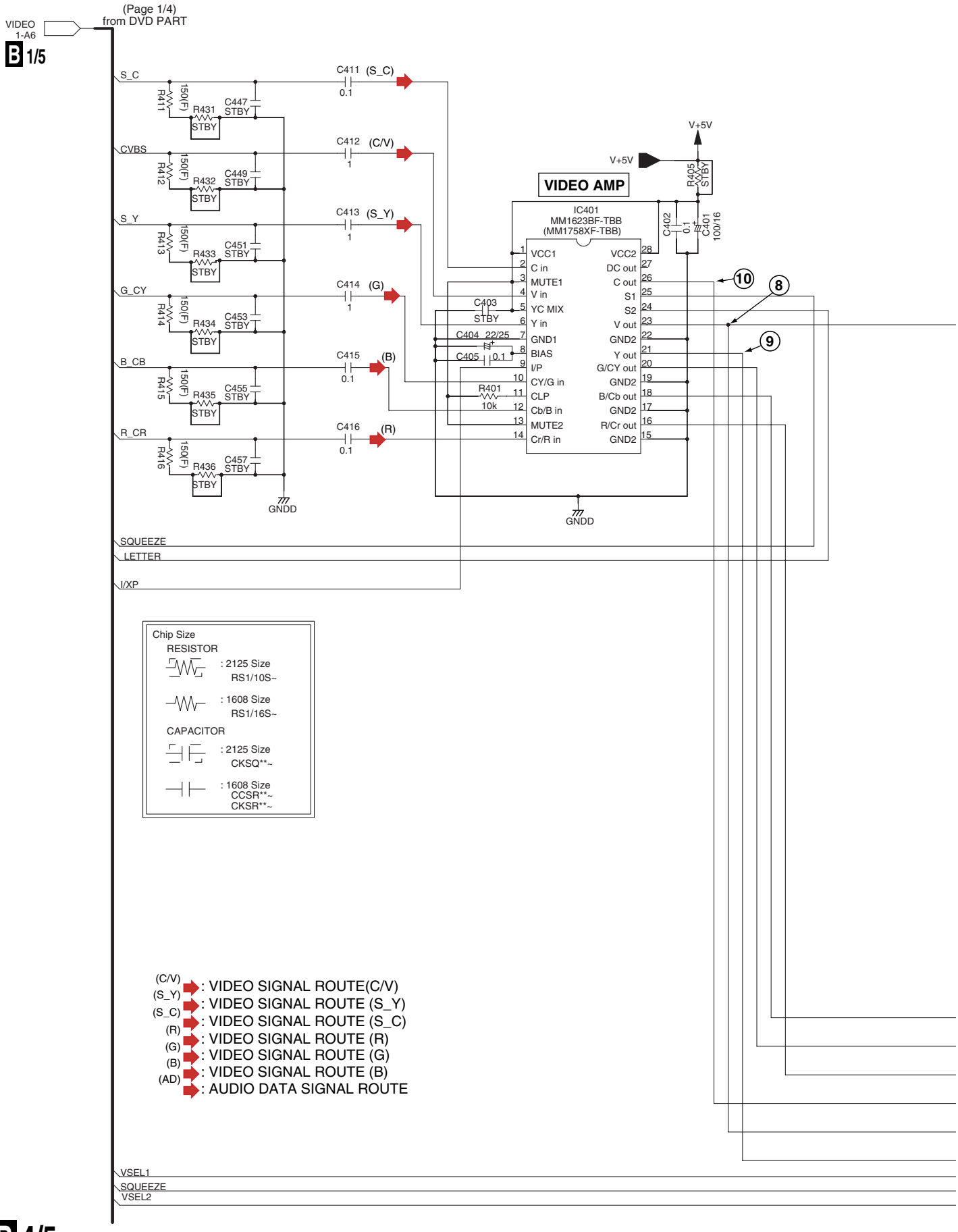
	/WYXJ MID	/WYXJ UPPER
AWM	8025	8026
R5513	-	-
R5514	68k	22k
R5515	47k	47k
R5516	15k	47k

*1	EU
R5522	STBY
R5531	0
R5537	STBY
R5538	STBY
R5542	STBY
R5544	0
R5598	STBY
R5543	0

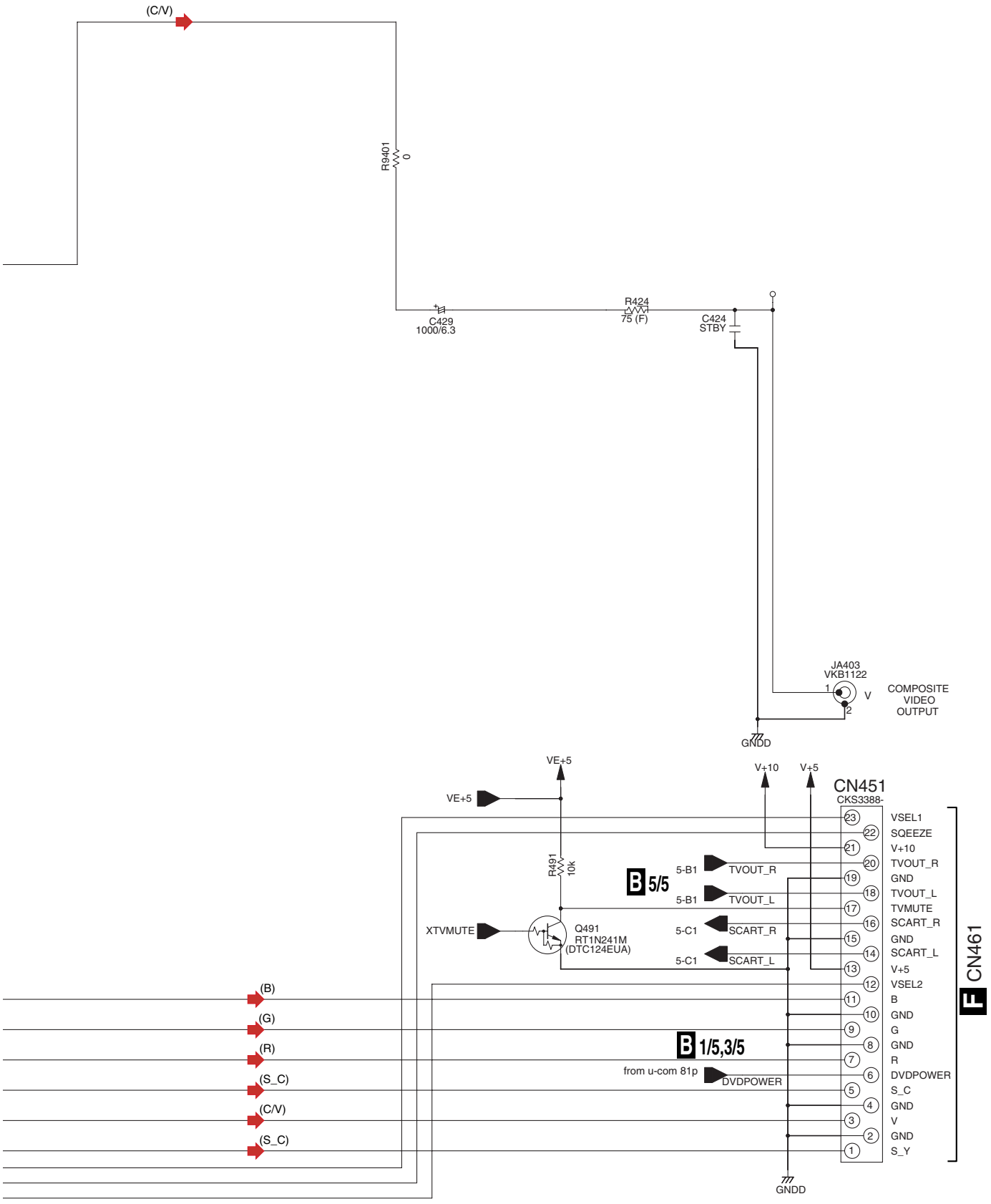
B 3/5 DVD MAIN ASSY (AWM8026:XV-DV360) (AWM8025:XV-DV353)



3.6 DVD MAIN ASSY (4/5)

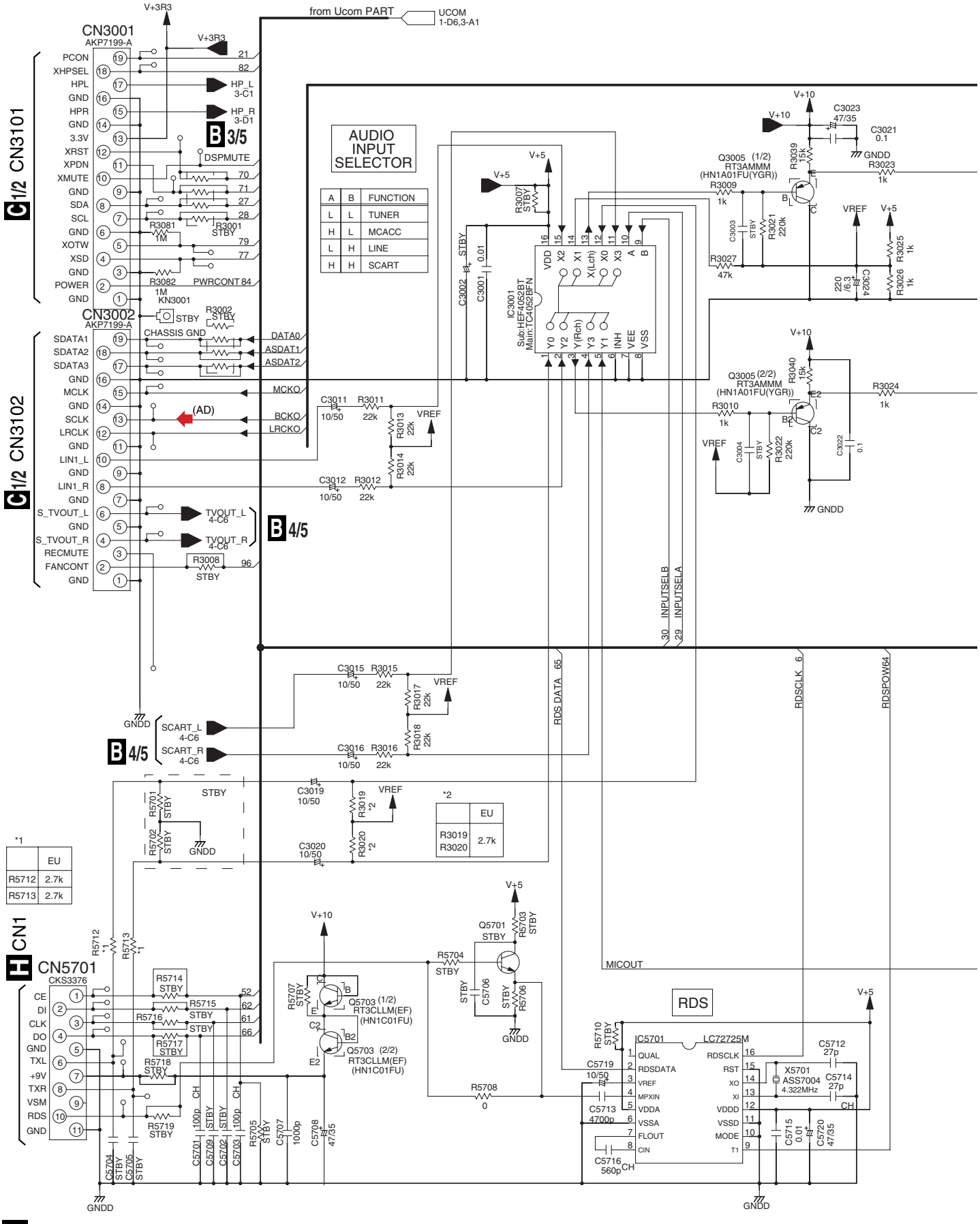


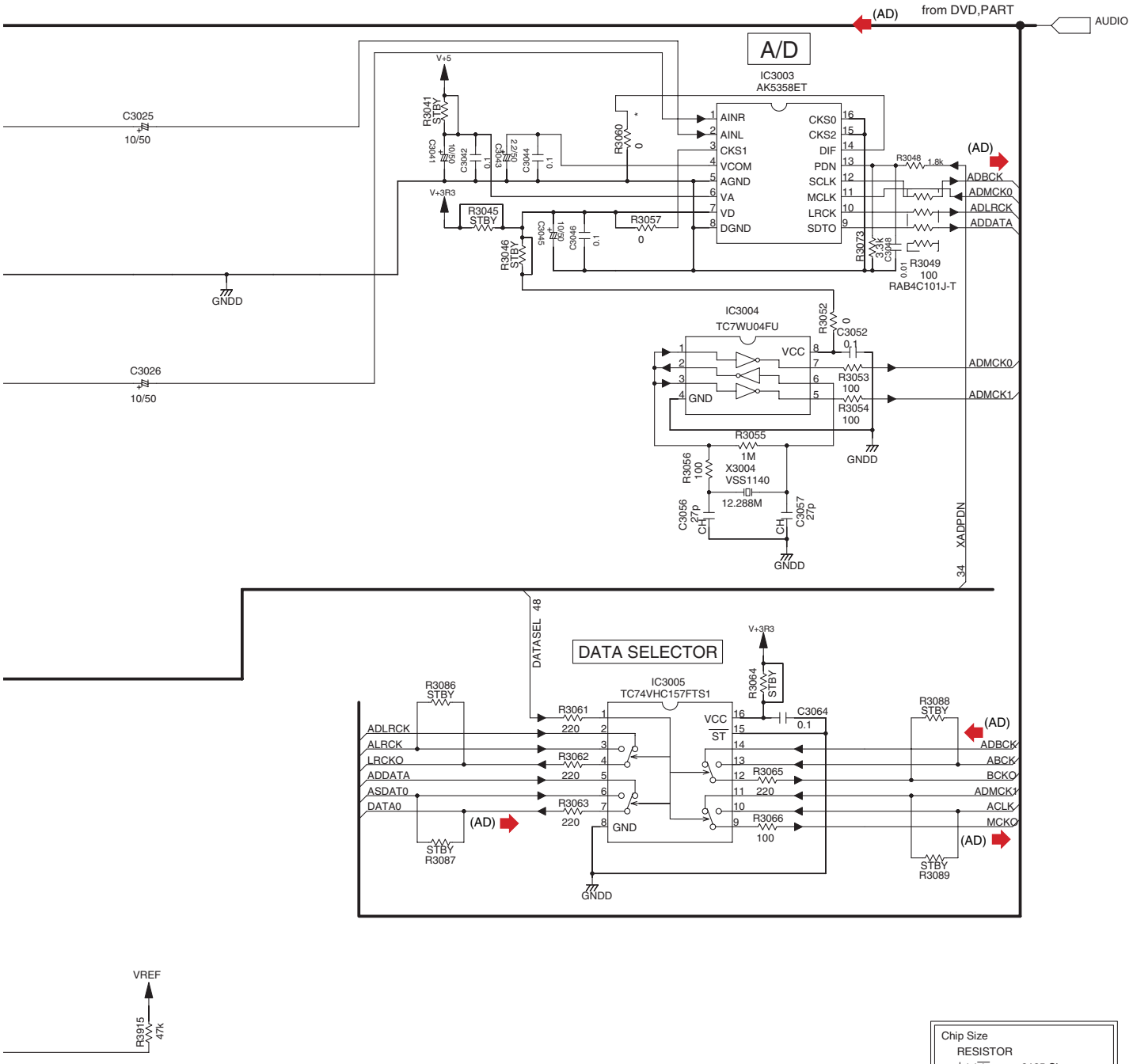
B 4/5 DVD MAIN ASSY (AWM8026:XV-DV360) (AWM8025:XV-DV353)



B 4/5

3.7 DVD MAIN ASSY (5/5)

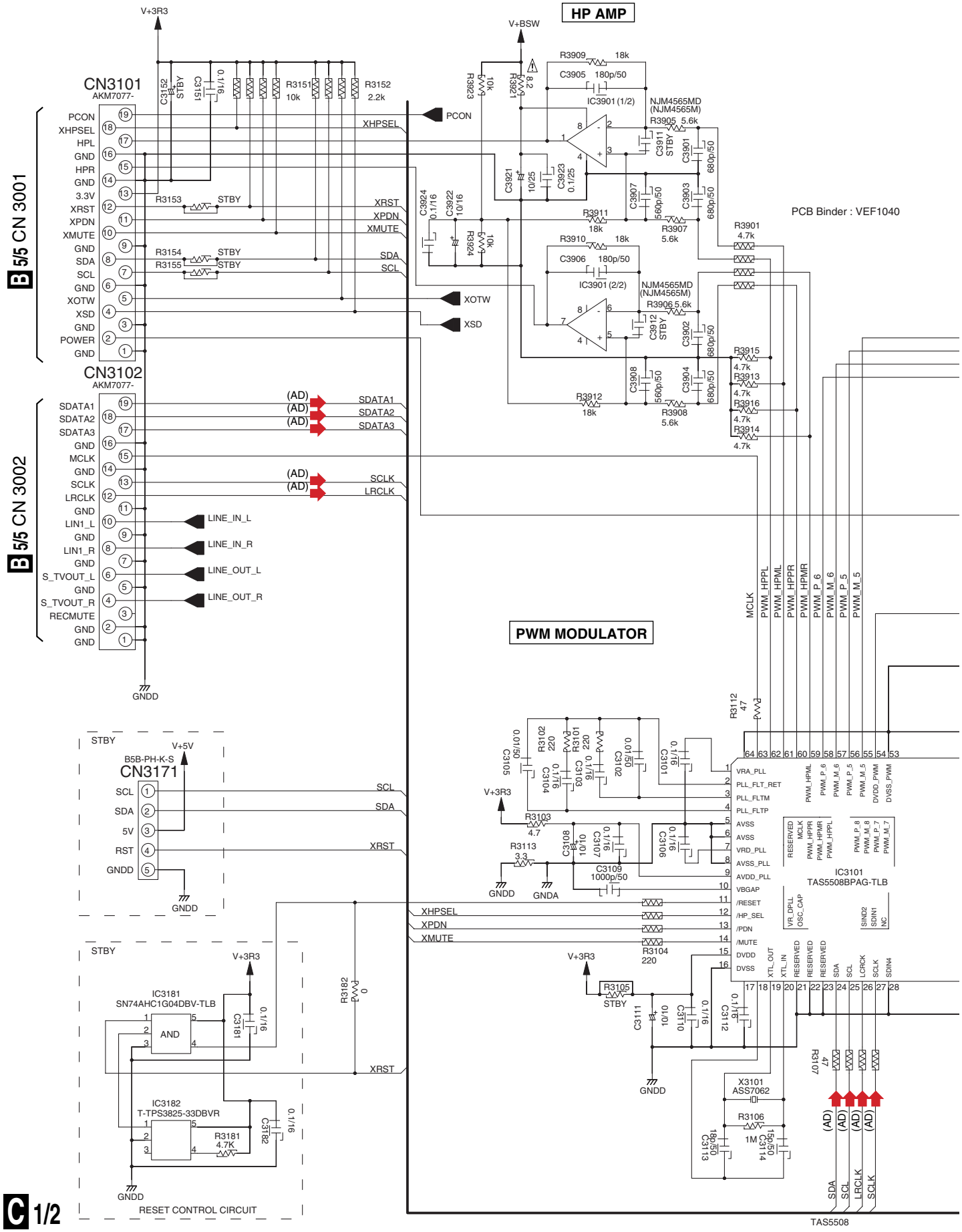




Chip Size
RESISTOR
: 2125 Size RS1/10S~
:1608 Size RS1/16S~
CAPACITOR
: 2125 Size CKSQ**~
:1608 Size CCSR**~ CKSR**~

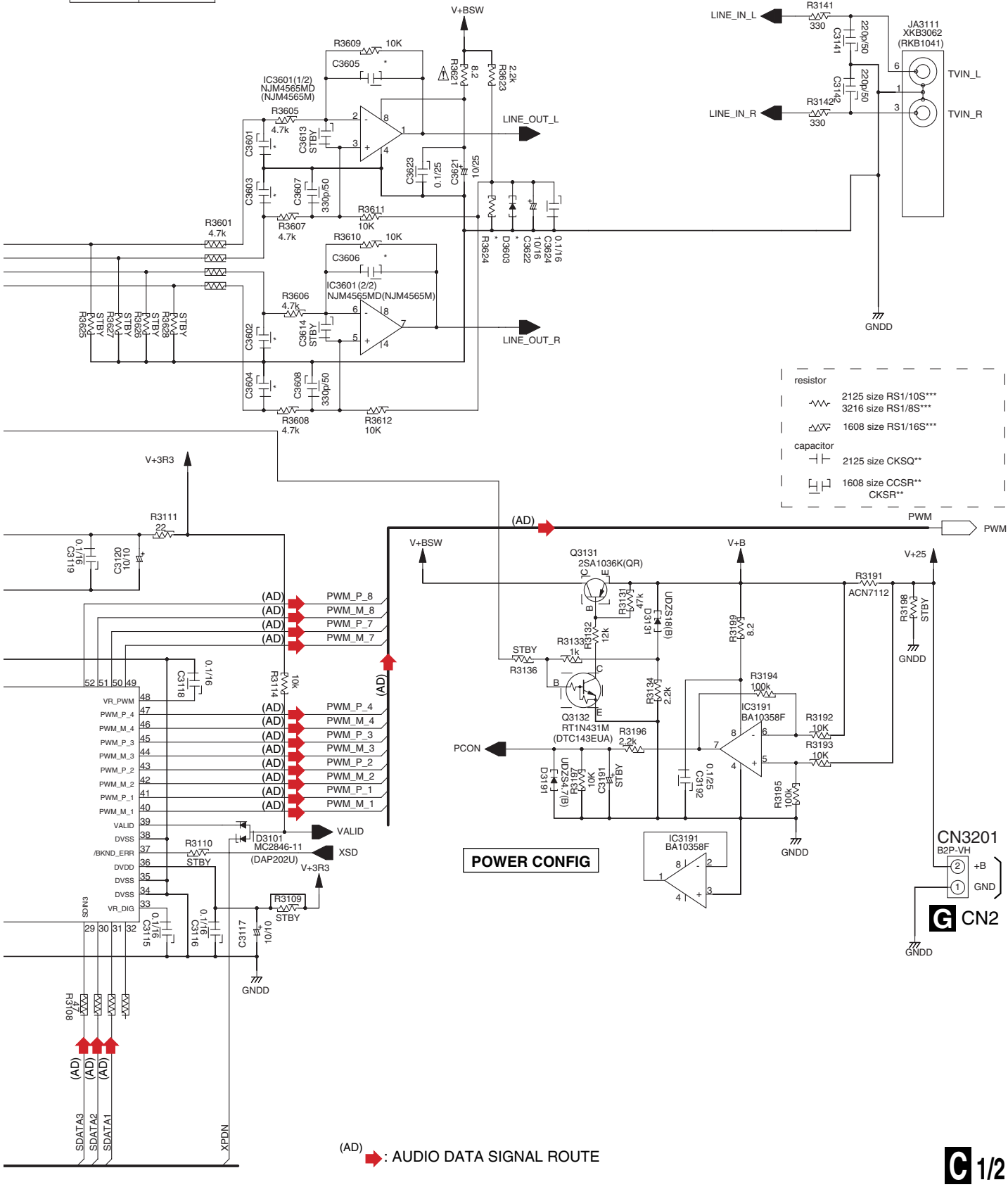
(AD) : AUDIO DATA SIGNAL ROUTE

3.8 DAMP ASSY (1/2)

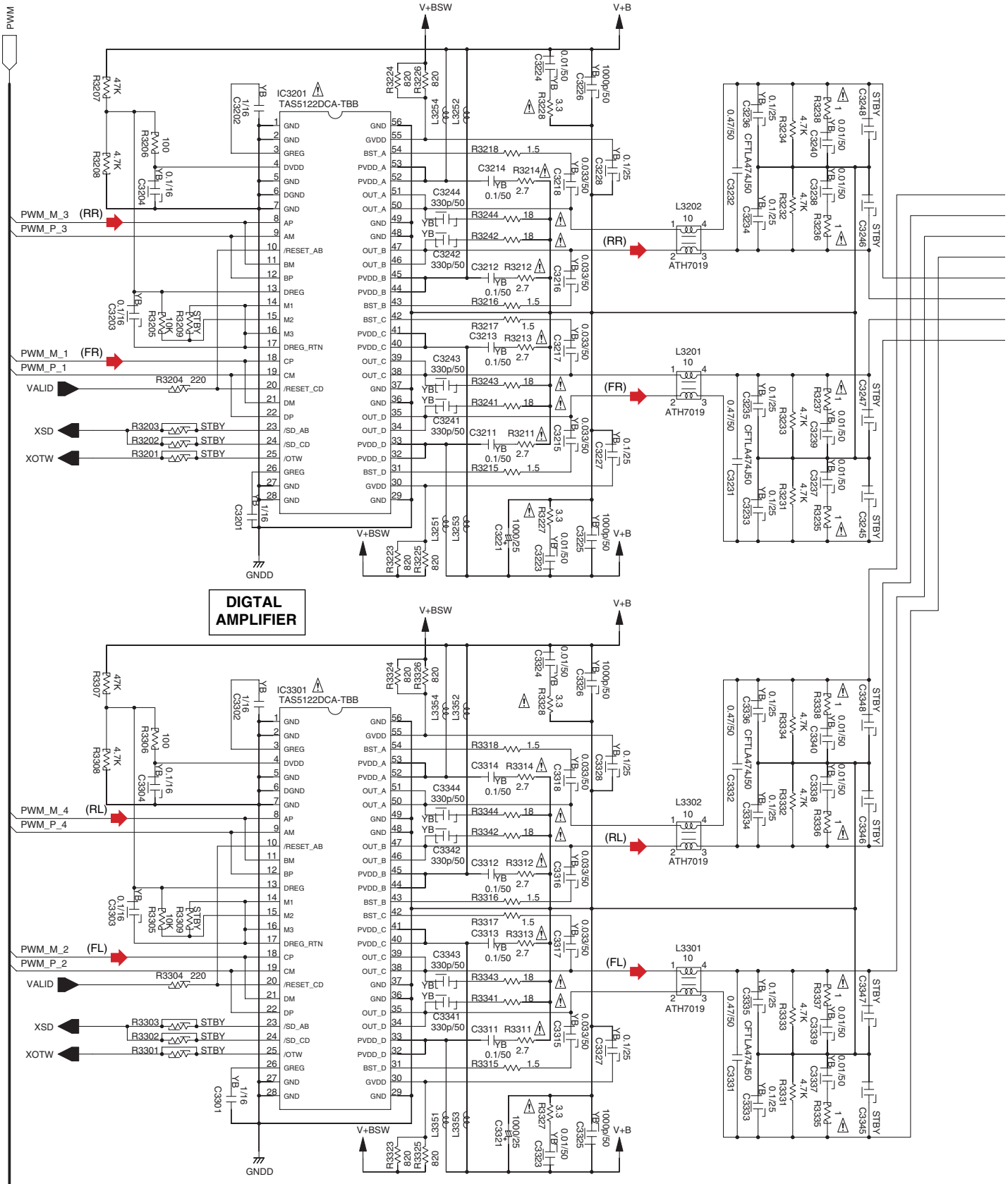


Destination and Spec	EU
Assy	AWK7931
R3624	2.2k
D3603	STBY
C3601 C3602 C3603 C3604	330p/50
C3605 C3606	150p/50

C 1/2 D-AMP ASSY (AWK7931)



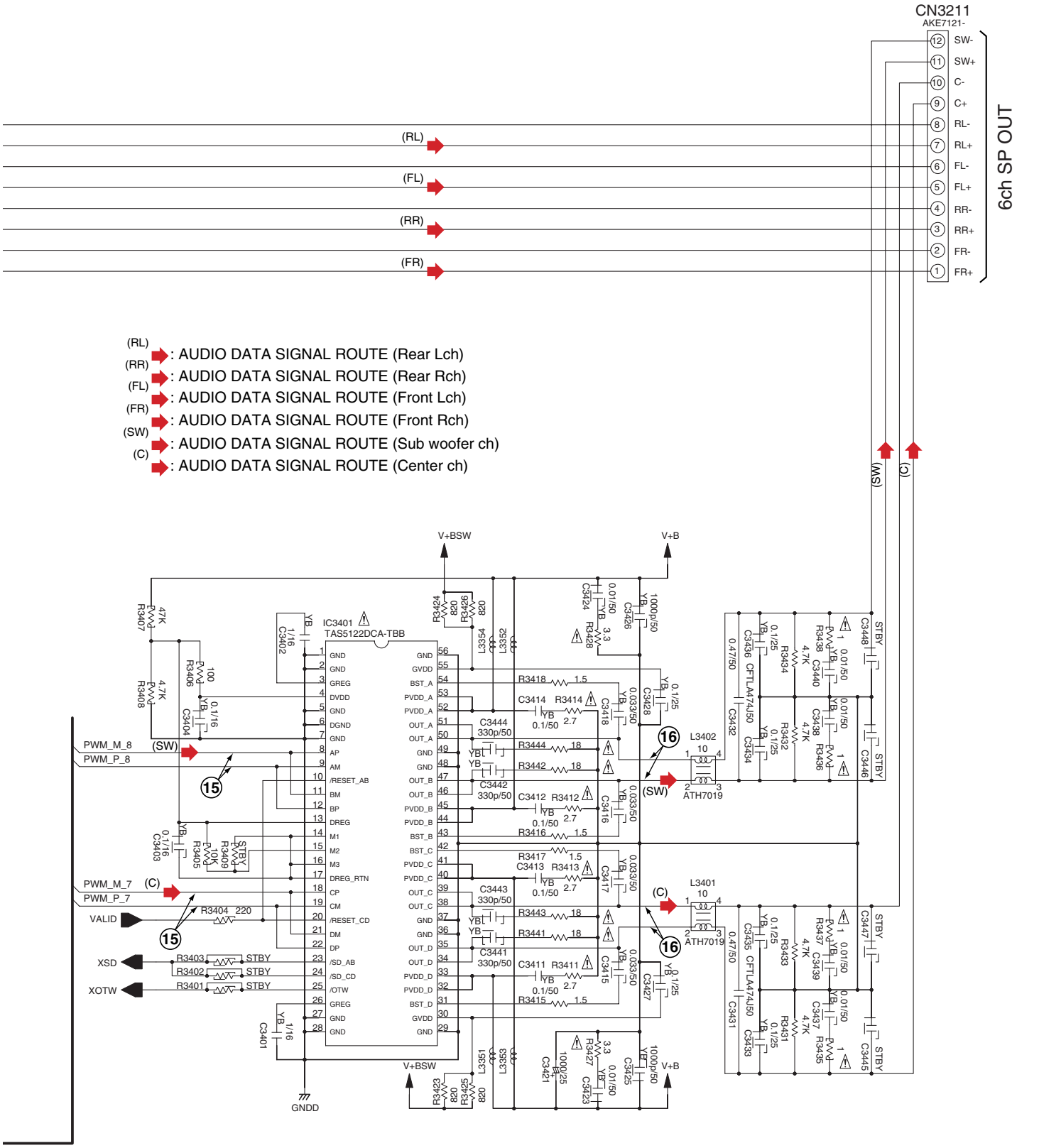
3.9 DAMP ASSY (2/2)



NOTICE
R3211–R3214,R3311–R3314,R3411–R3414 : ACN7141 (2.7Ω))

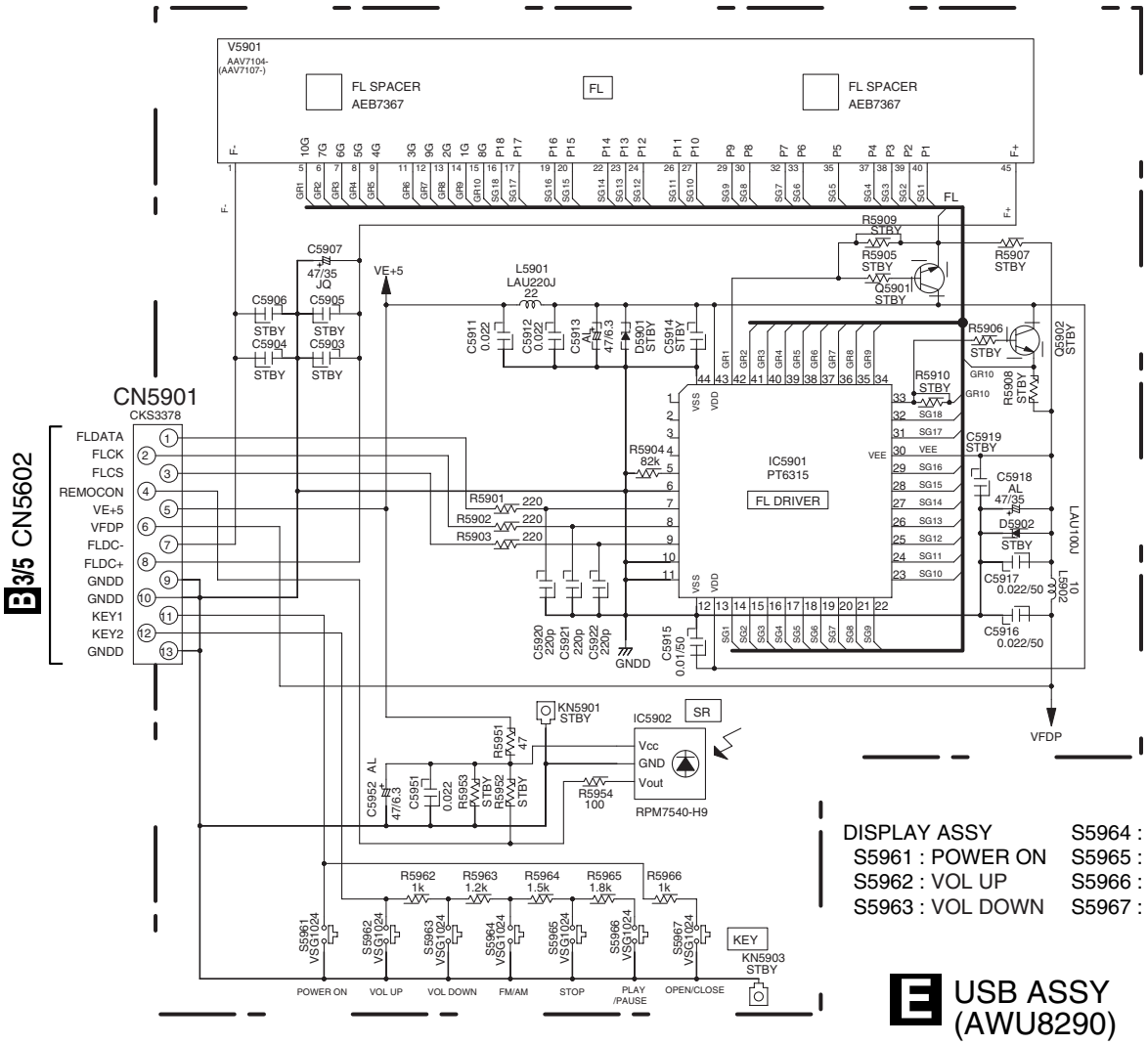
C 2/2

C 2/2 D-AMP ASSY (AWK7931)



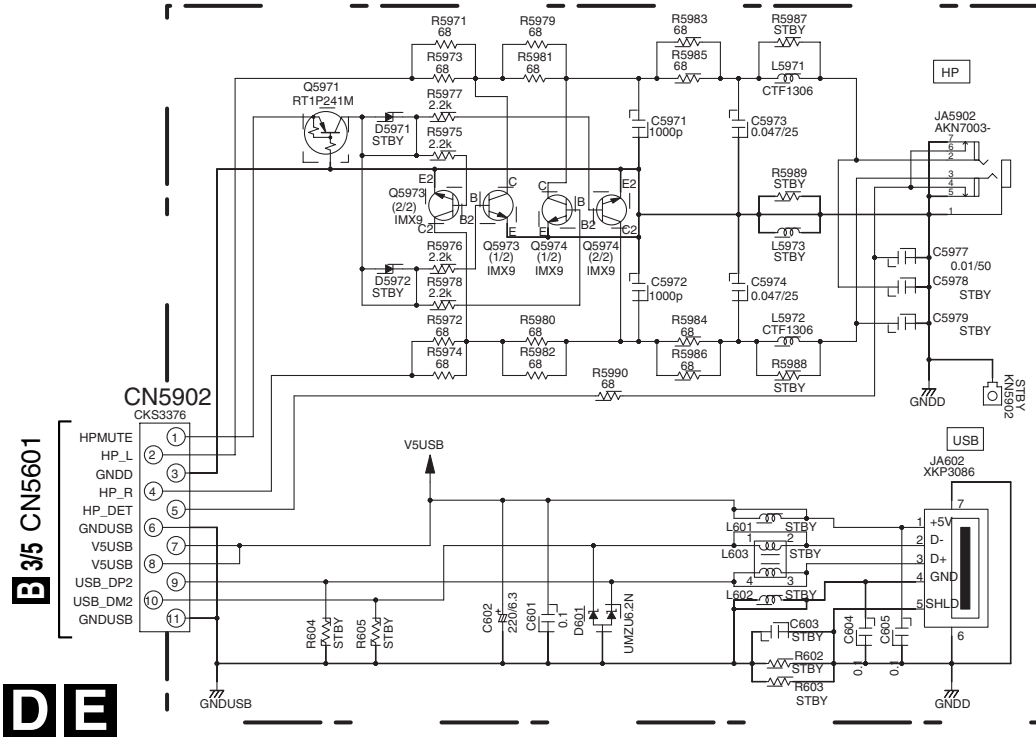
3.10 DISPLAY and USB ASSYS

D DISPLAY ASSY (AWU8289)



DISPLAY ASSY
- S5961 : POWER ON
- S5962 : VOL UP
- S5963 : VOL DOWN
- S5964 : FM/AM
- S5965 : STOP
- S5966 : PLAY/PAUSE
- S5967 : OPEN/CLOSE

E USB ASSY (AWU8290)



NOTES

ALL CAPACITORS ARE IN μF
UNLESS OTHERWISE SPECIFIED

- CKSRYB**K50
- JQ : CEJQ**M**
- AL : CEAL**M**
- AT : CEAT**M**

ALL RESISTORS ARE IN Ω

- RS1/16S***J
- RS1/10S***J

ALL INDUCTORS ARE IN μH

- LAU***J-TA

A

B

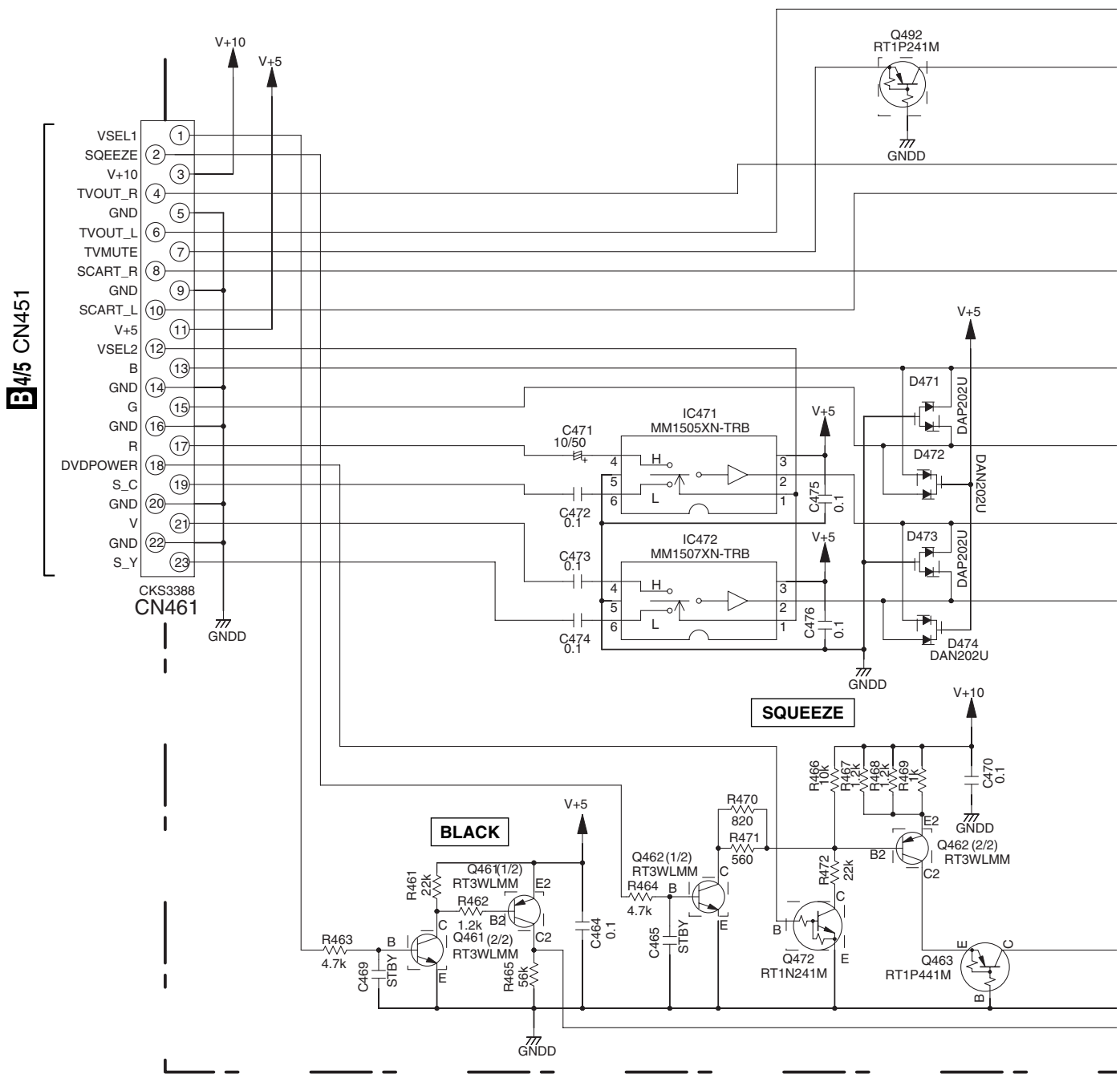
C

D

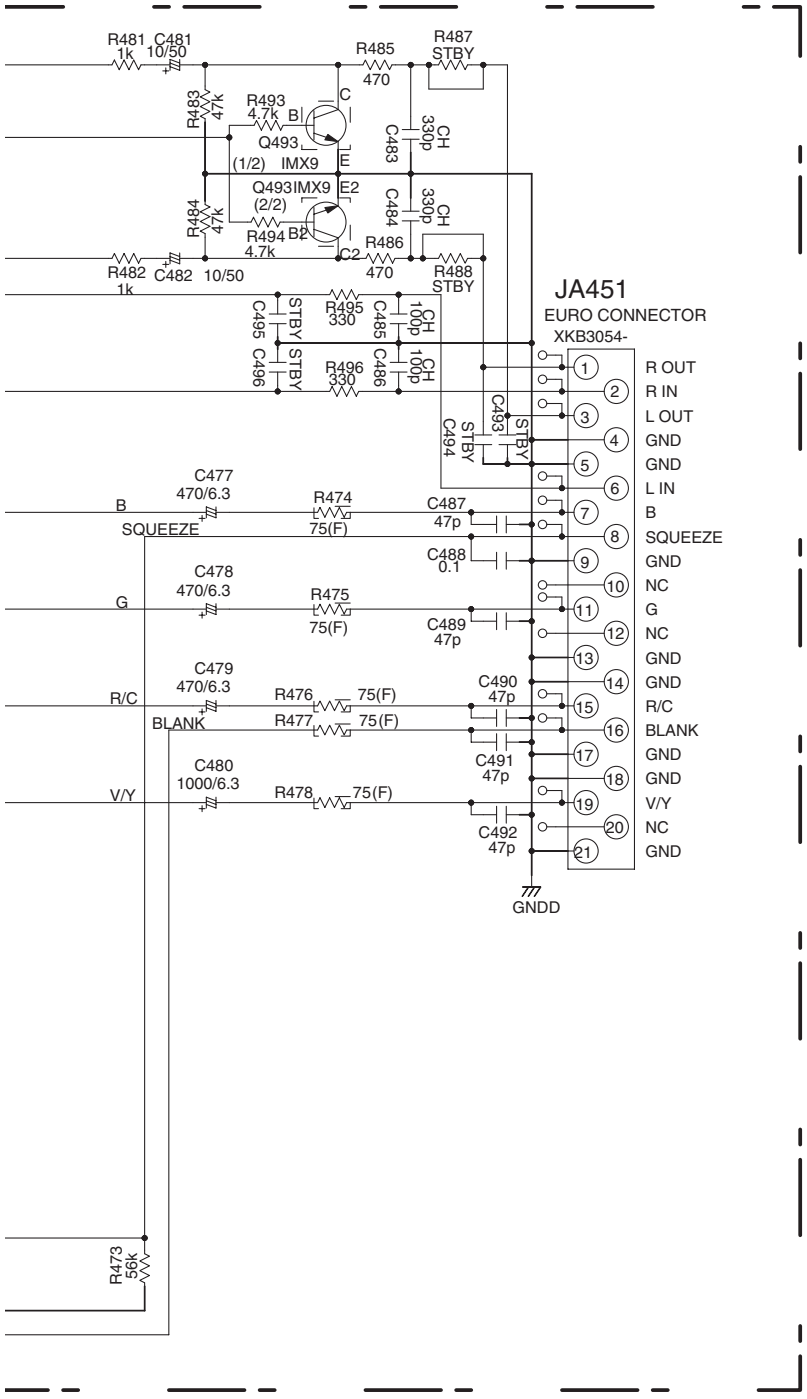
E

F

3.11 EURO SCART ASSY



F EURO SCART ASSY (AWU8291)



NOTES

ALL CAPACITORS ARE IN μF
UNLESS OTHERWISE SPECIFIED

CKSRYB**K50

JQ : CEJQ**M**

AL : CEAL**M**

AT : CEAT**M**

ALL RESISTORS ARE IN Ω

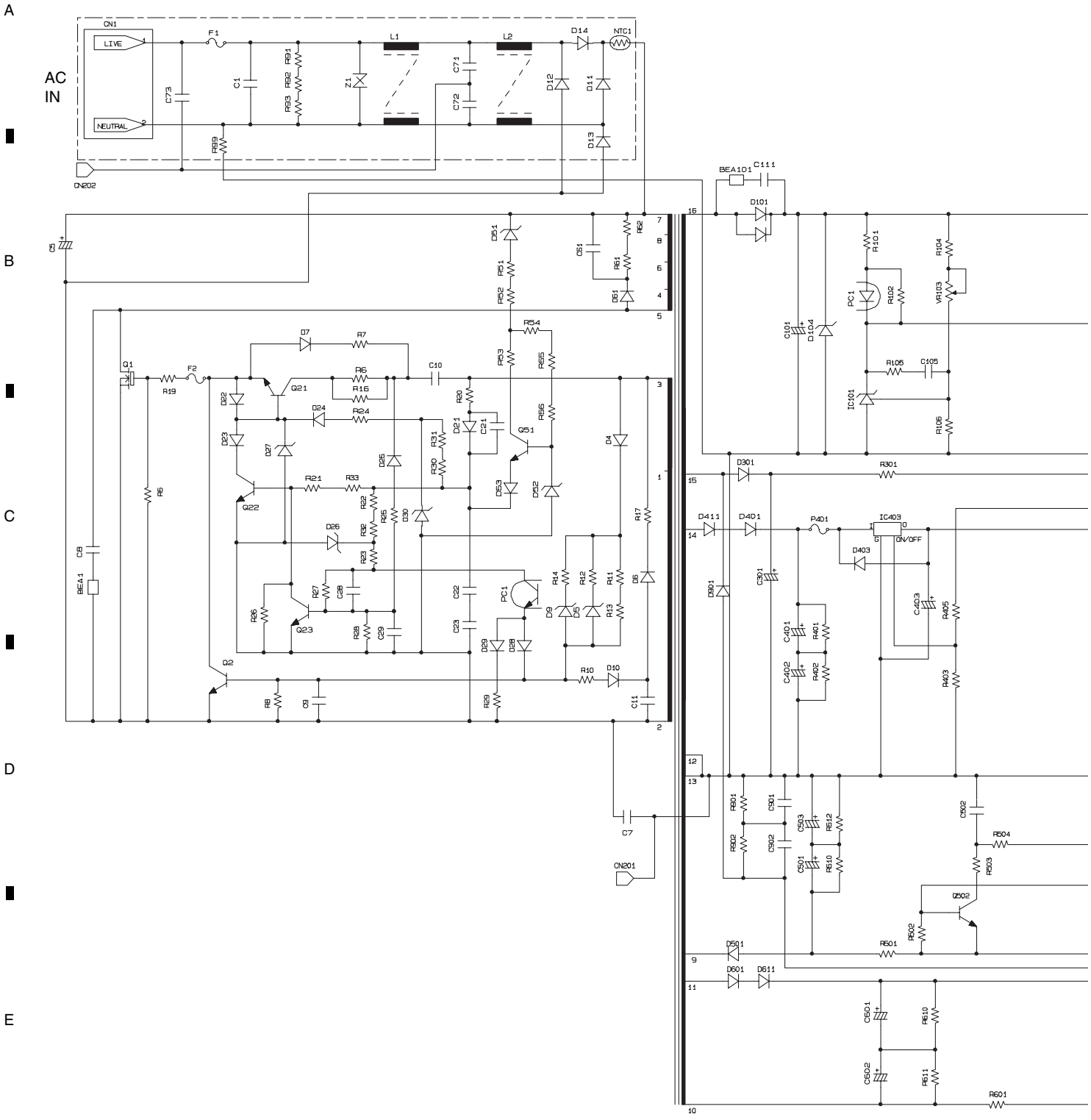
RS1/16S***J

RS1/10S***J

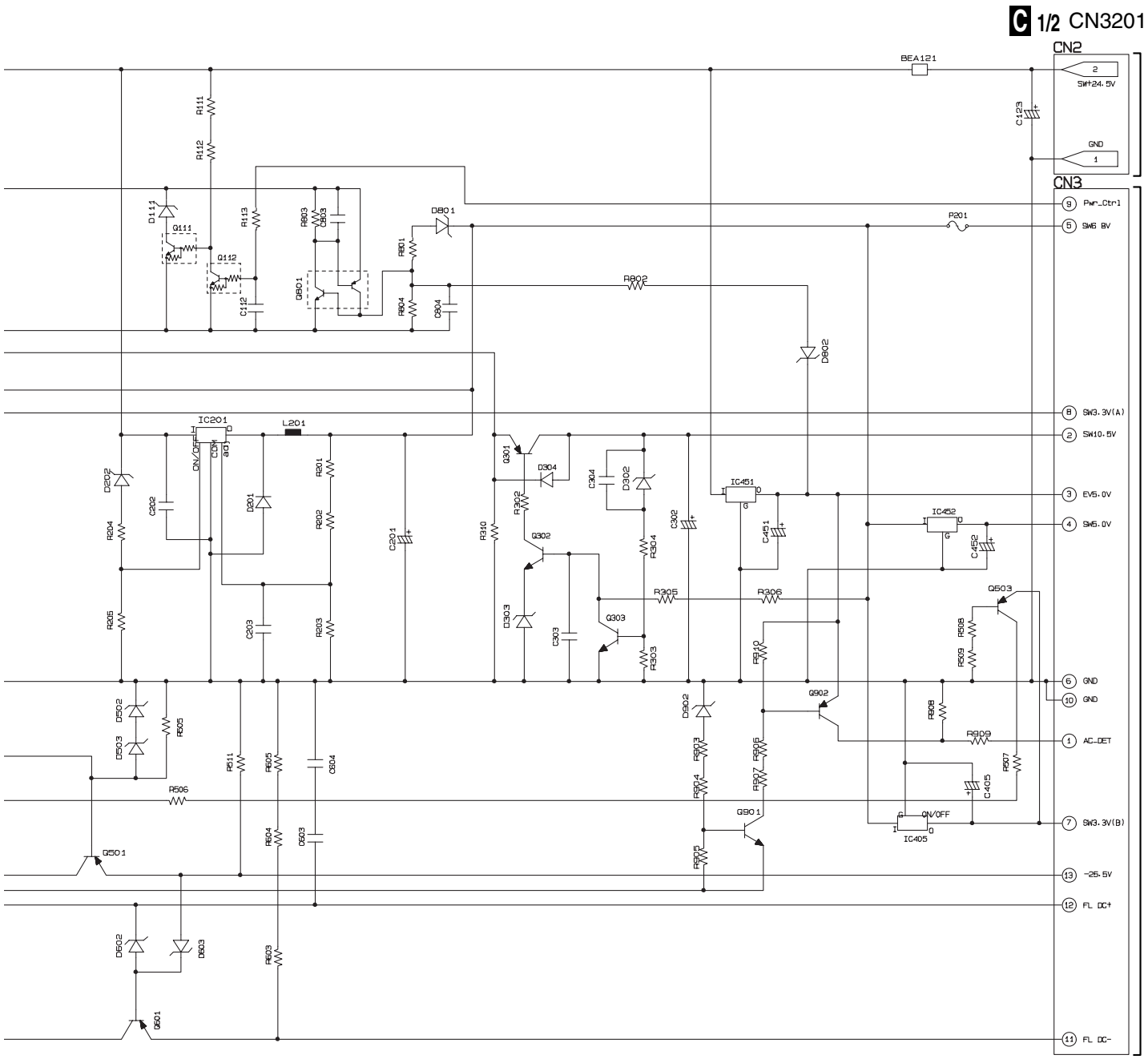
ALL INDUCTORS ARE IN μH

LCYA***J2520

3.12 POWER SUPPLY UNIT



G POWER SUPPLY UNIT (AWR7041)



3.13 WAVEFORMS

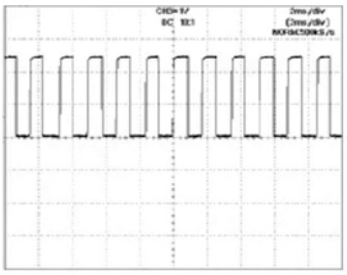
Note : The encircled numbers denote measuring point in the schematic diagram.

B DVDM ASSY

Measurement condition ;

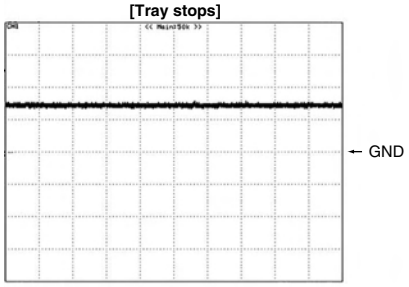
No. 1 to 10 : reference A1 (DVD), T2-chp 19, Color-bar
No. 11 to 14 : reference A1 (DVD), T1

1 **IC201-pin50 [FG]**
V: 1V/div. H: 2msec/div.

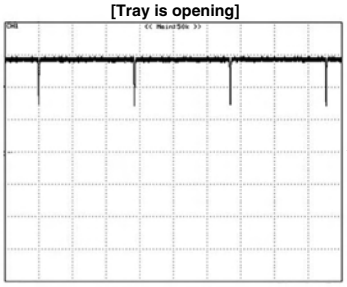


2 **IC201-pin 39 [TROPENPWM]**
V: 1V/div. H: 5µsec/div.

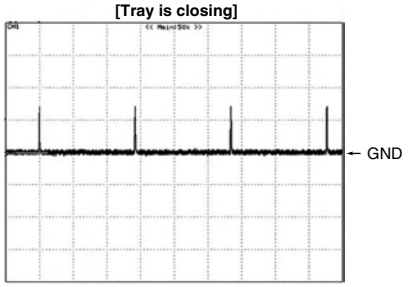
[Tray stops]



[Tray is opening]

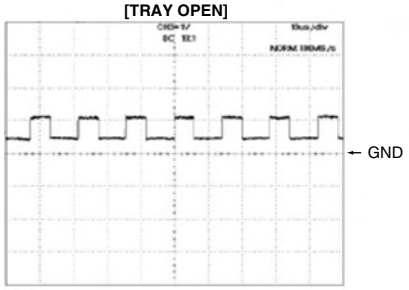


[Tray is closing]



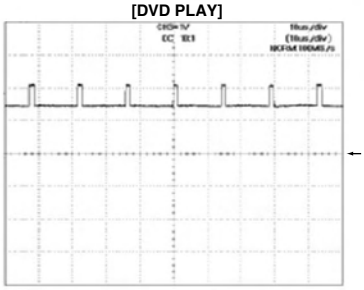
3 **IC201-pin37 [DMSO]**
V: 1V/div. H: 10µsec/div.

[TRAY OPEN]



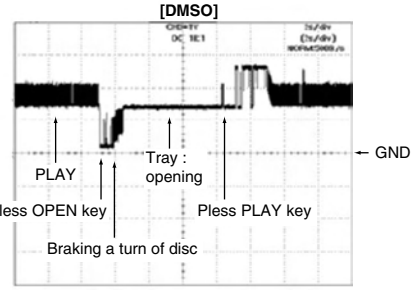
V: 1V/div. H: 10µsec/div.

[DVD PLAY]

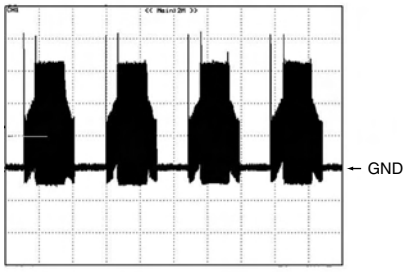


V: 1V/div. H: 2sec/div.

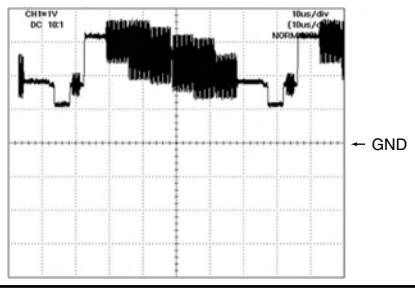
[DMSO]



4 **CN102-pin 11, 10, 9 (IC101-pin 30, 33, 36) [SPINDLE (WVU)]**
V: 2V/div. H: 2msec/div.

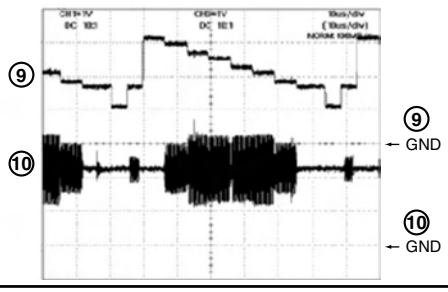


8 **IC401-pin23 [CompositeVideo Out]**
V: 1V/div. H: 10µsec/div.

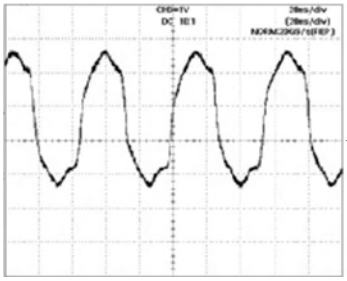


9 **IC401-pin21 [S VIDEO OUT - Y]**
V: 1V/div. H: 10µsec/div.

10 **IC401-pin26 [S VIDEO OUT - C]**
V: 1V/div. H: 10µsec/div.



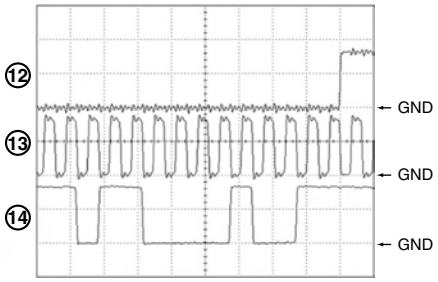
⑪ IC201-pin212 [ACLK]
V: 1V/div. H: 20nsec/div.



⑫ IC201-pin209 [ALRCK]
V: 2V/div. H: 500nsec/div.

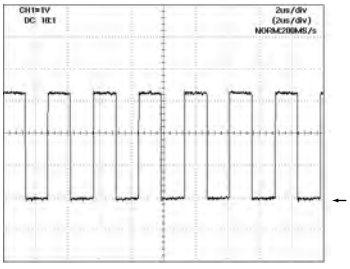
⑬ IC201-pin210 [ABCK]
V: 2V/div. H: 500nsec/div.

⑭ IC201-pin197 [ASDATA0]
V: 2V/div. H: 500sec/div.

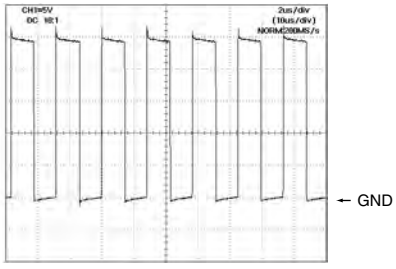


C DAMP ASSY

⑮ IC3201, IC3301, IC3401 [PWM_M, PWM_P]
V: 1V/div. H: 2µsec/div.



⑯ IC3201, IC3301, IC3401 [OUT_A, B, C, D]
V: 5V/div. H: 2µsec/div.



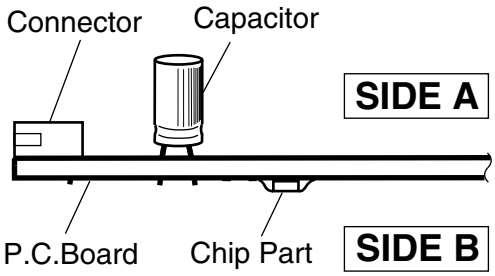
4. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

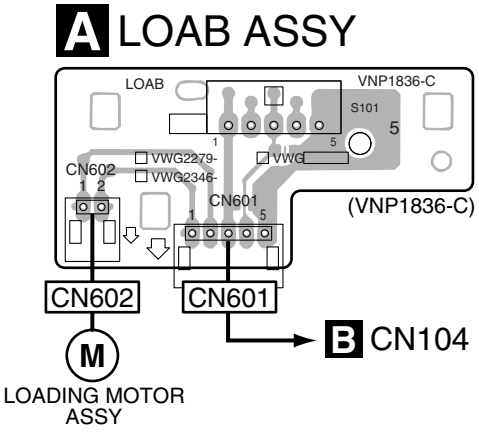
Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
B C E	B C E B C E	Transistor
B C E	B C E B C E	Transistor with resistor
D G S	D G S D G S	Field effect transistor
		Resistor array
		3-terminal regulator

3. The parts mounted on this PCB include all necessary parts for several destinations.
   For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.

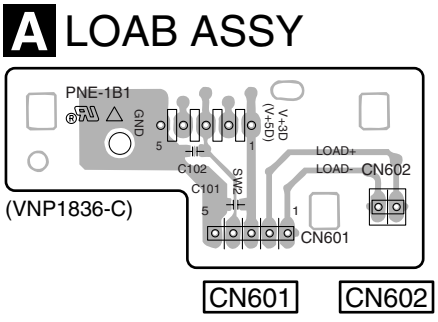


4.1 LOAB ASSY

SIDE A



SIDE B

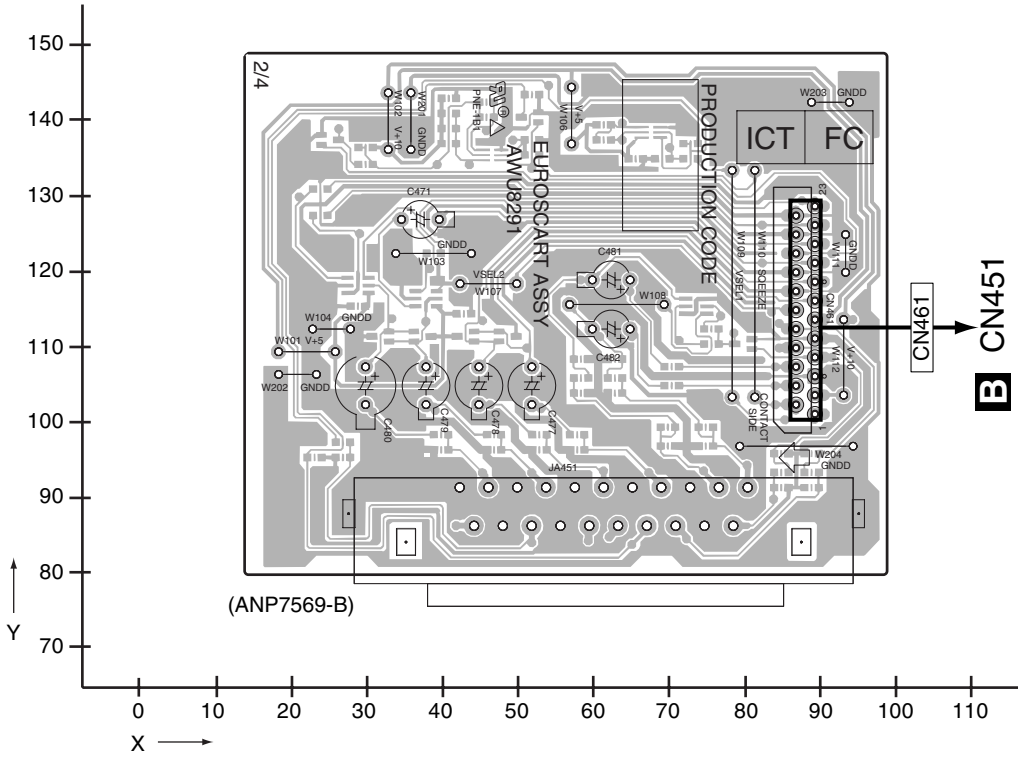


4.2 EURO SCART ASSY

SIDE A

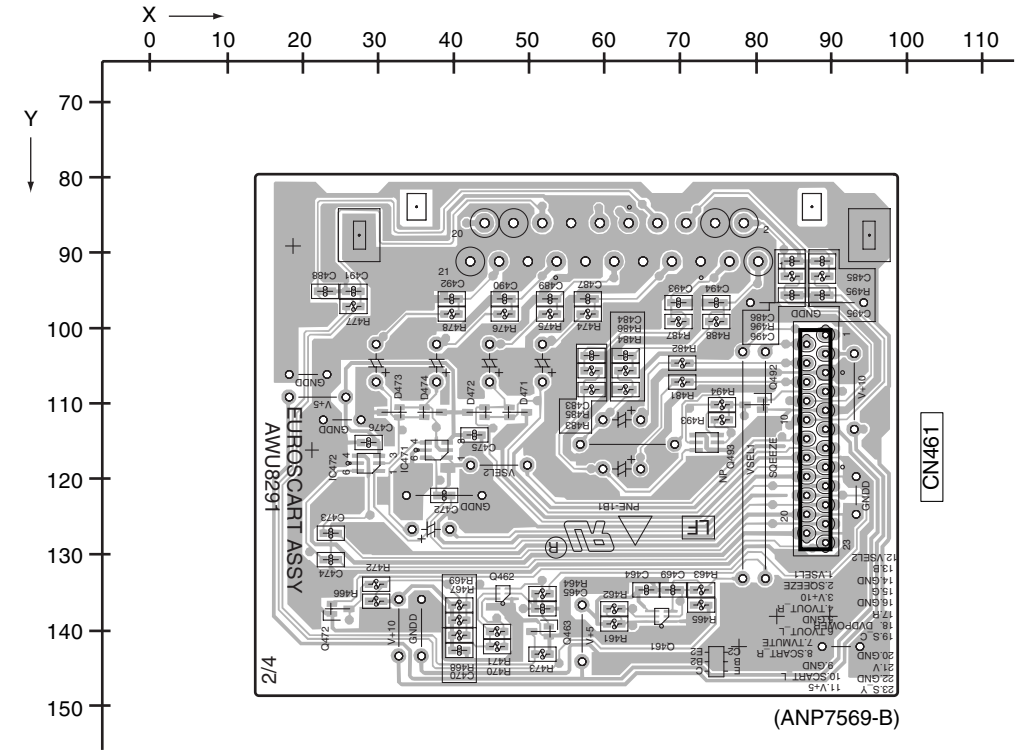
SIDE A

F EUROSCART ASSY



SIDE B

SIDE B

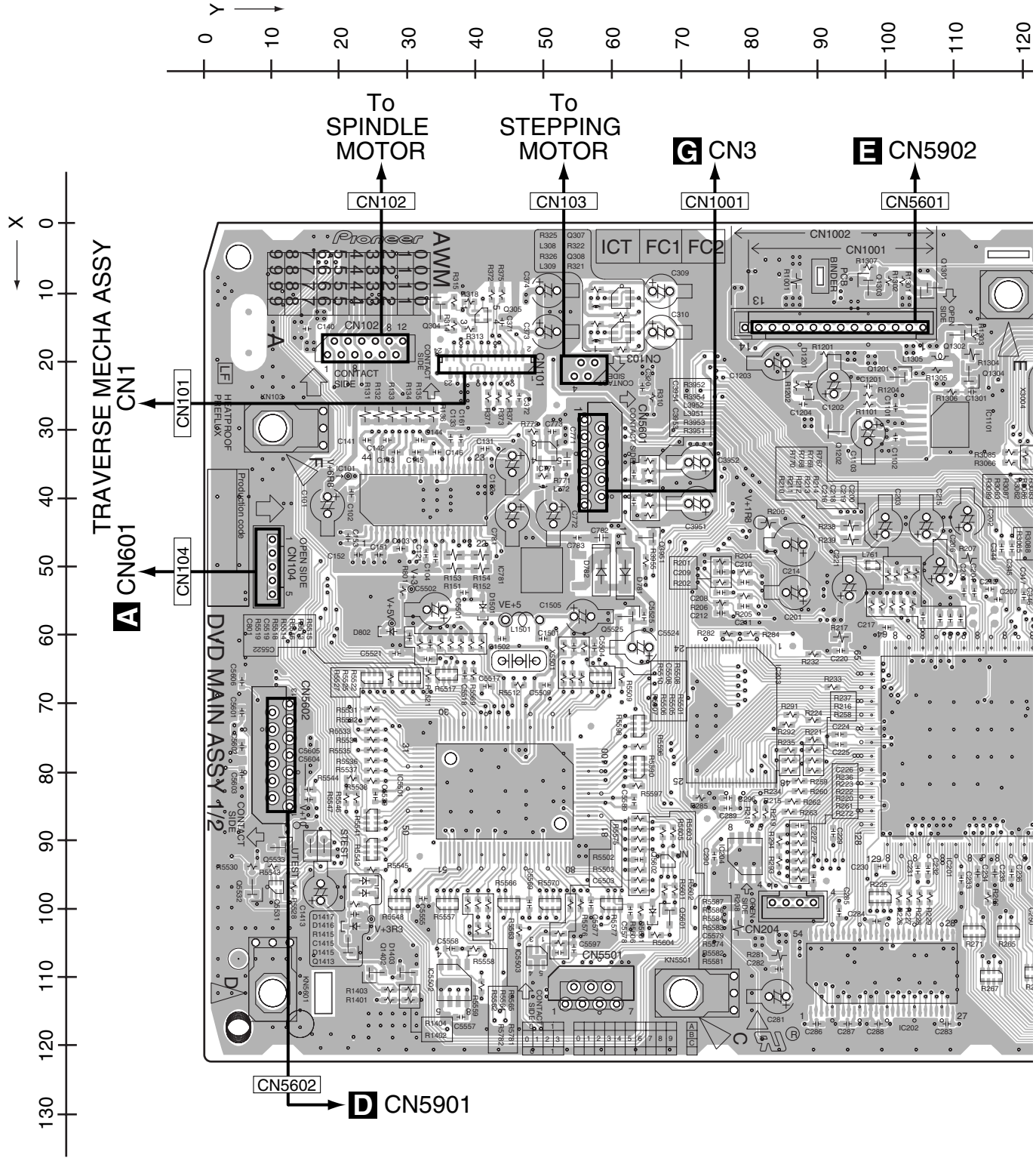


F **F**

4.3 DVD MAIN ASSY

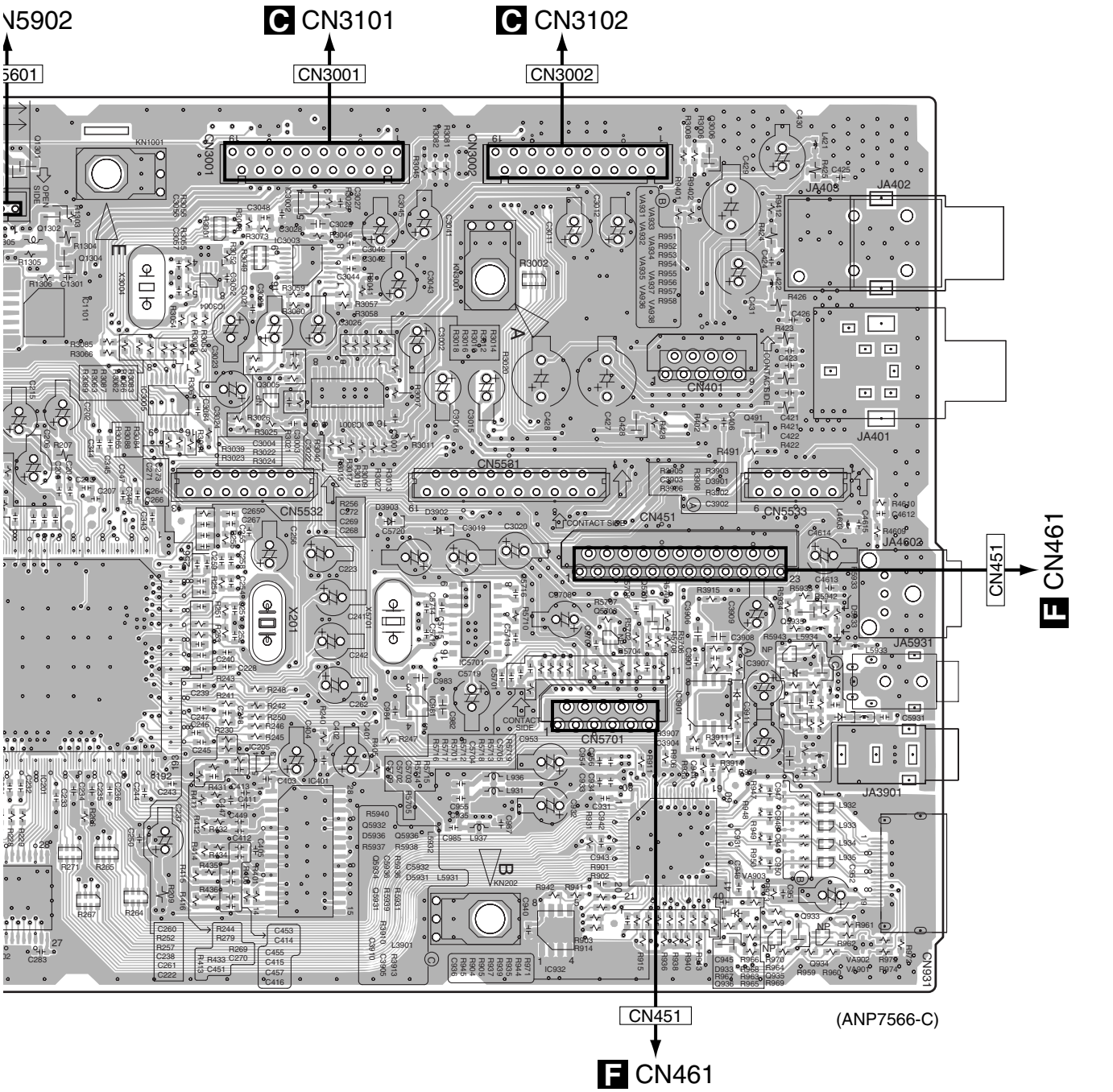
SIDE A

B **DVD MAIN ASSY**



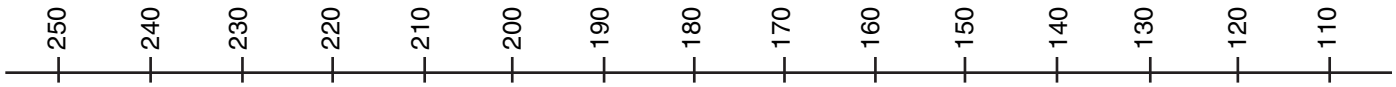
SIDE A

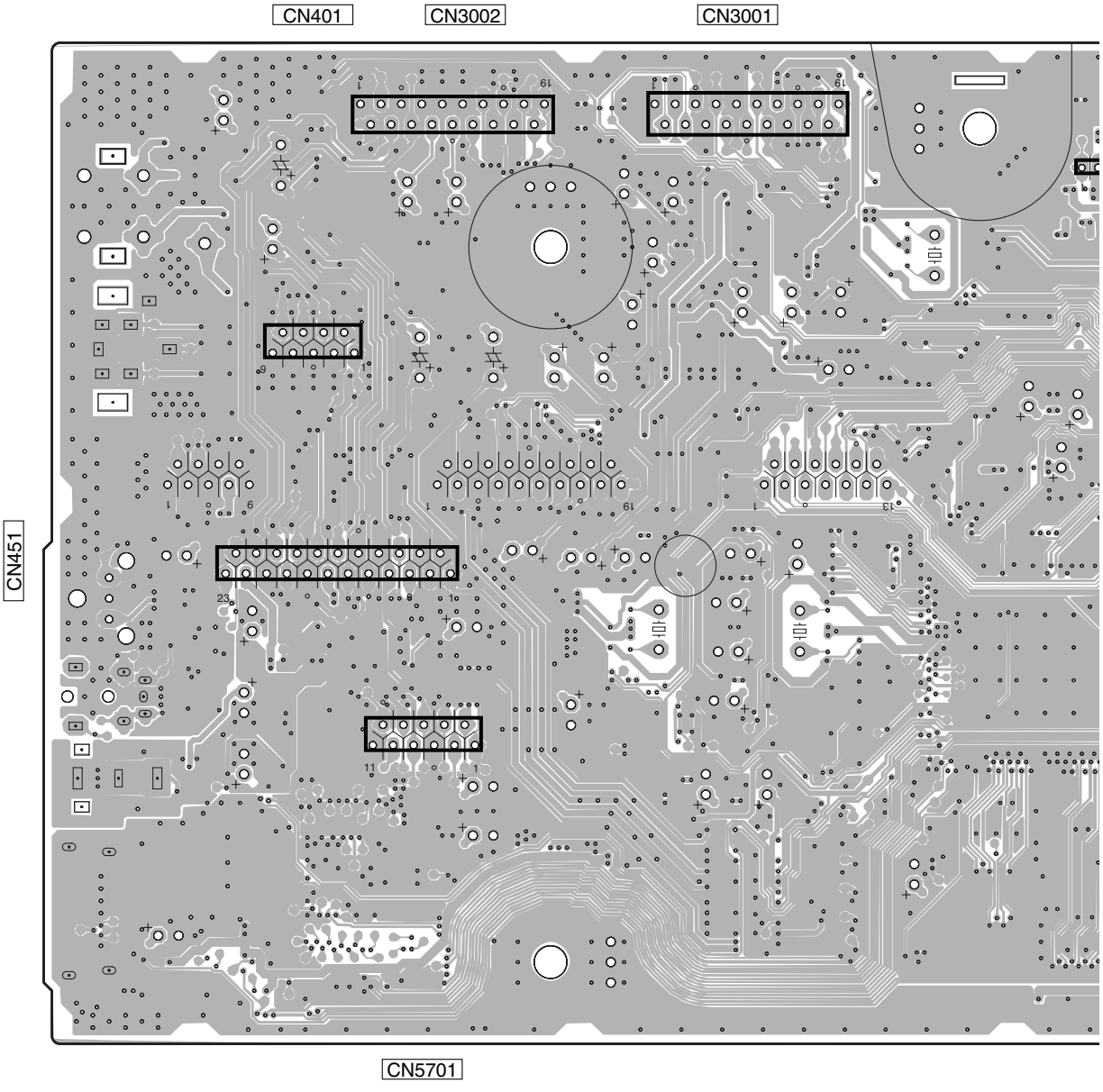
110 120 130 140 150 160 170 180 190 200 210 220 230 240 250



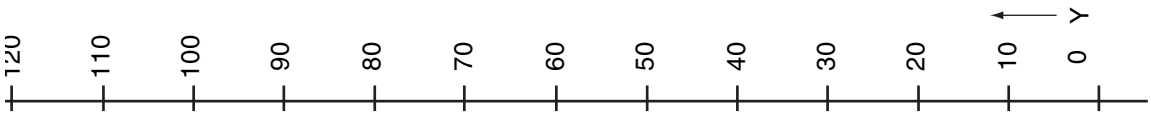
SIDE B

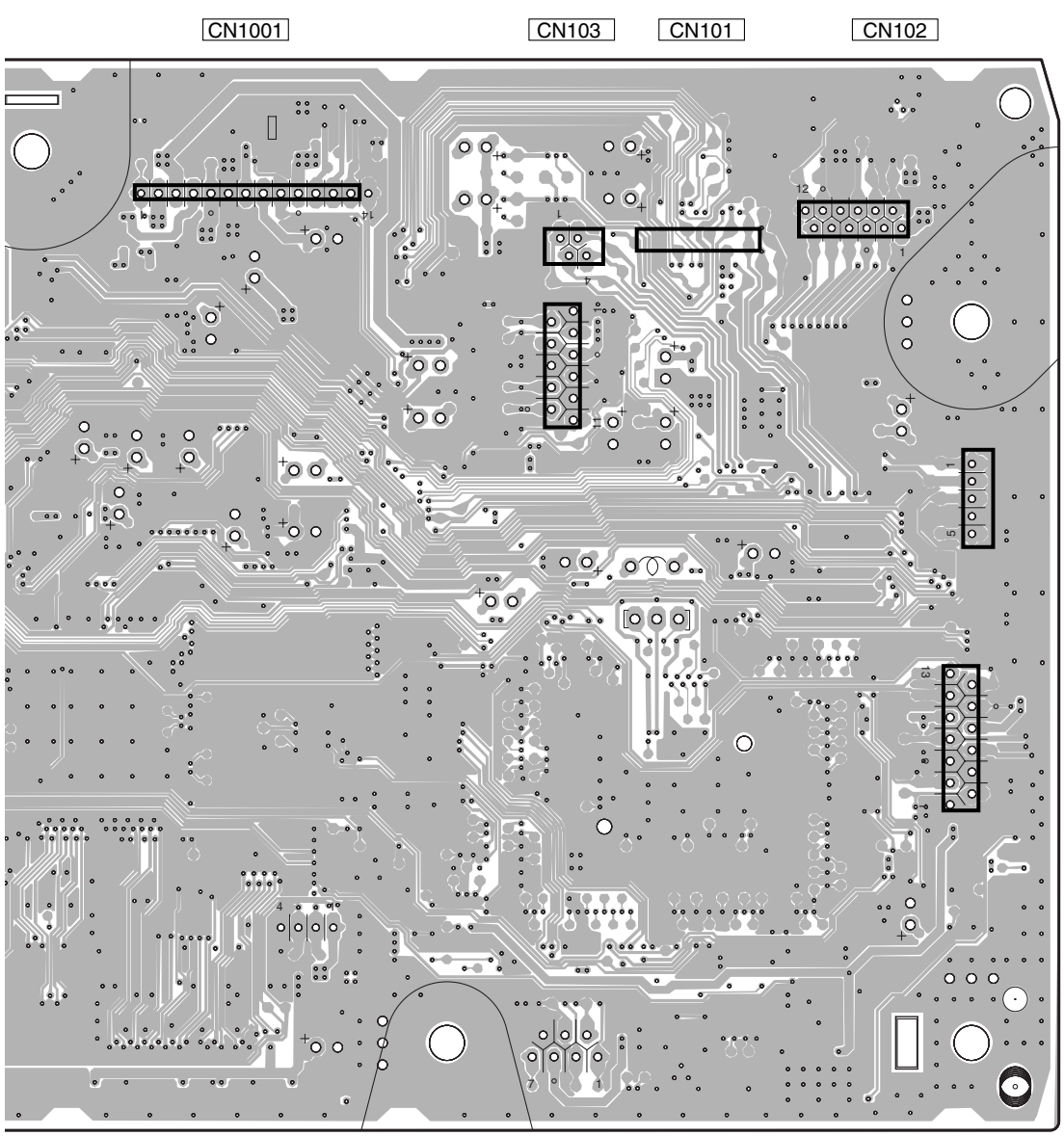
B DVD MAIN ASSY





SIDE B



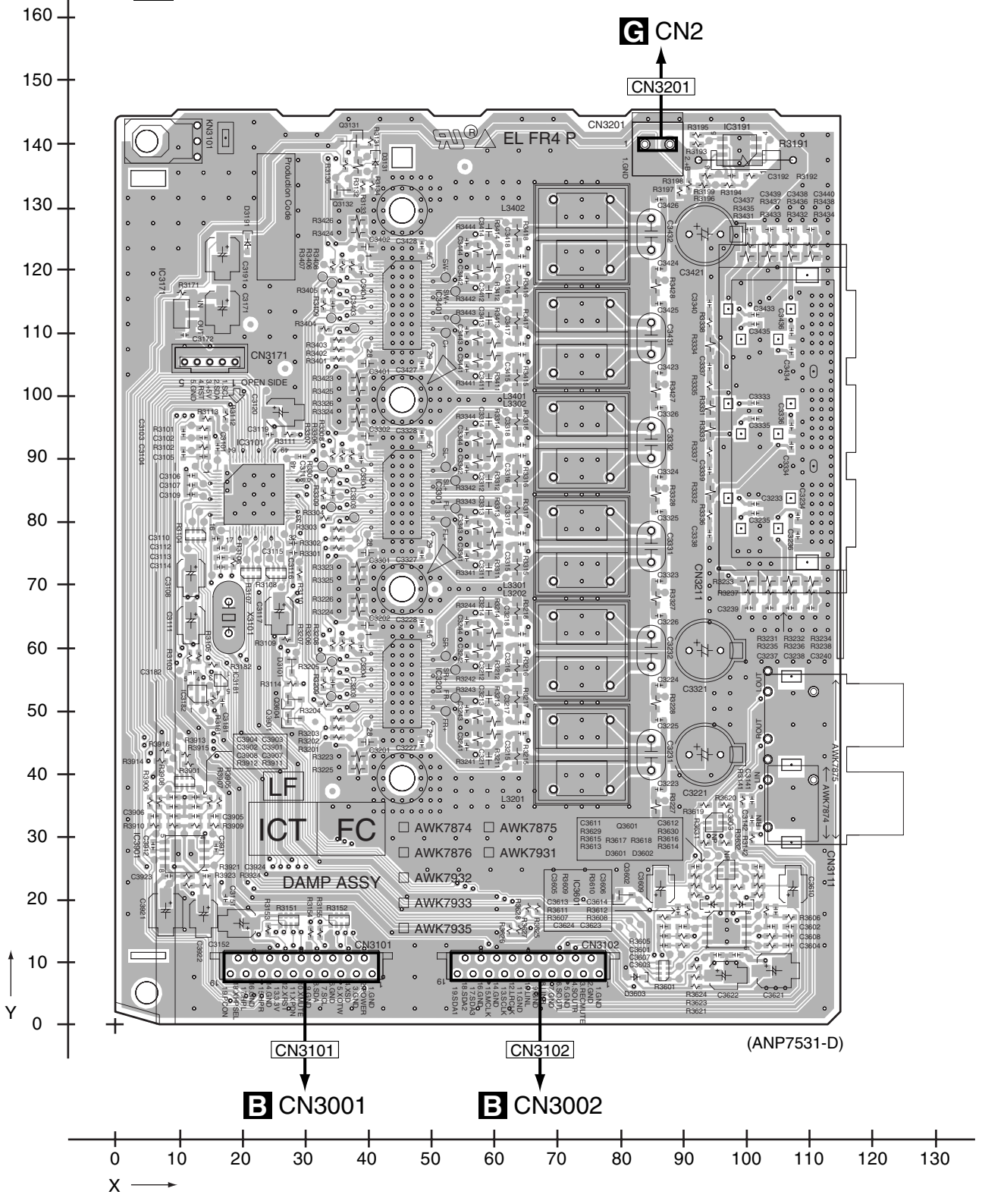


(ANP7566-C)

4.4 DAMP ASSY

SIDE A **SIDE A**

C DAMP ASSY

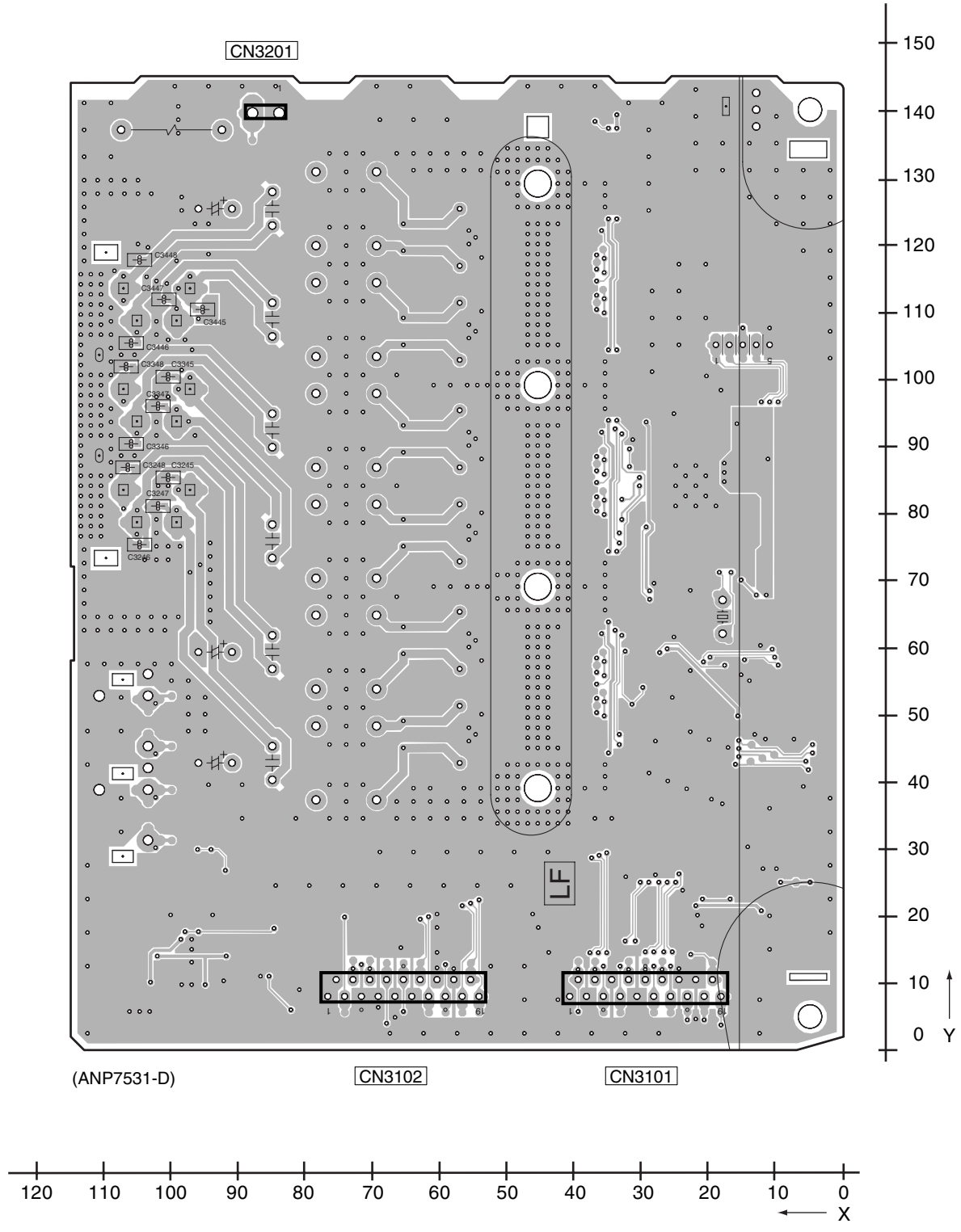


SIDE B

SIDE B

A

C DAMP ASSY



B

C

D

E

F

C

C

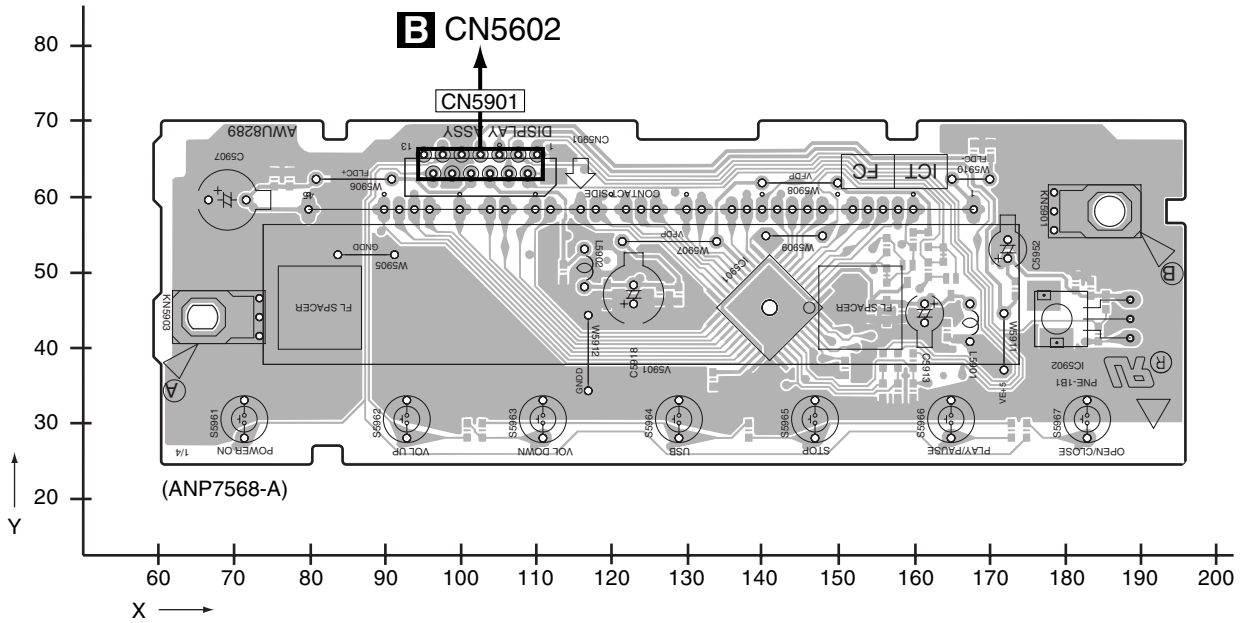
5 6 7 8

4.5 DISPLAY and USB ASSYS

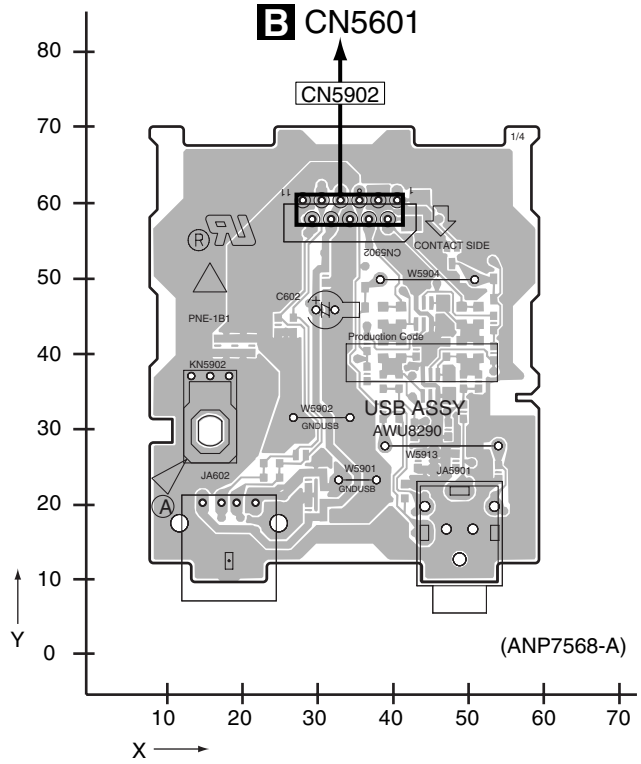
SIDE A

SIDE A

D DISPLAY ASSY



E USB ASSY



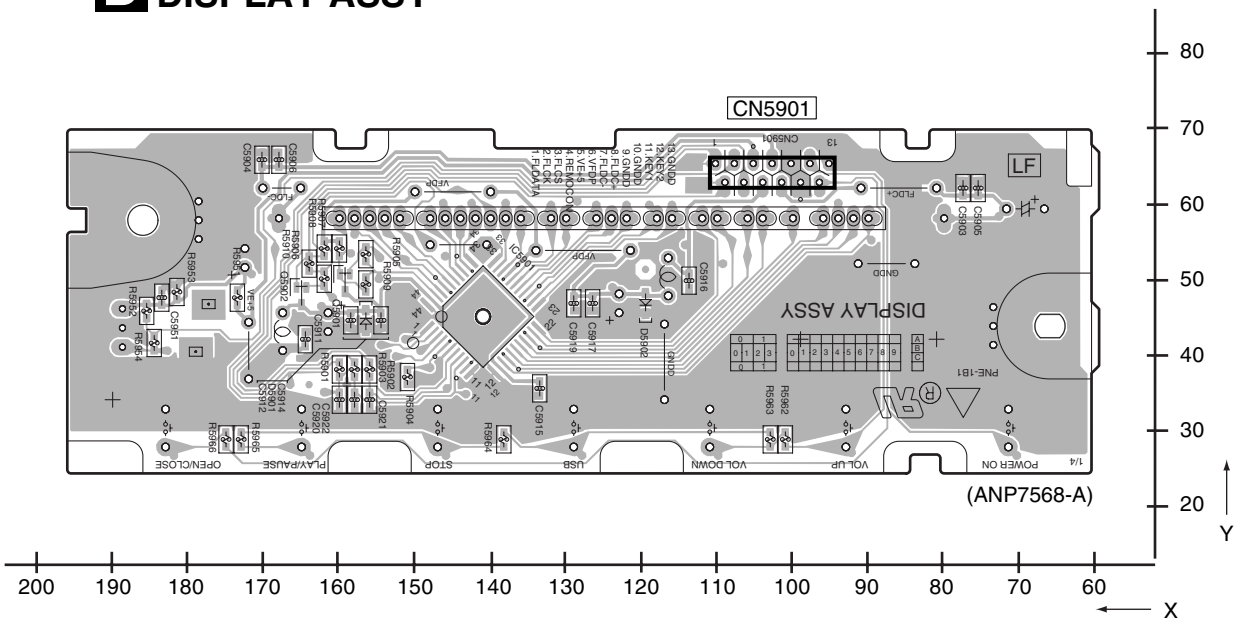
D E

D E

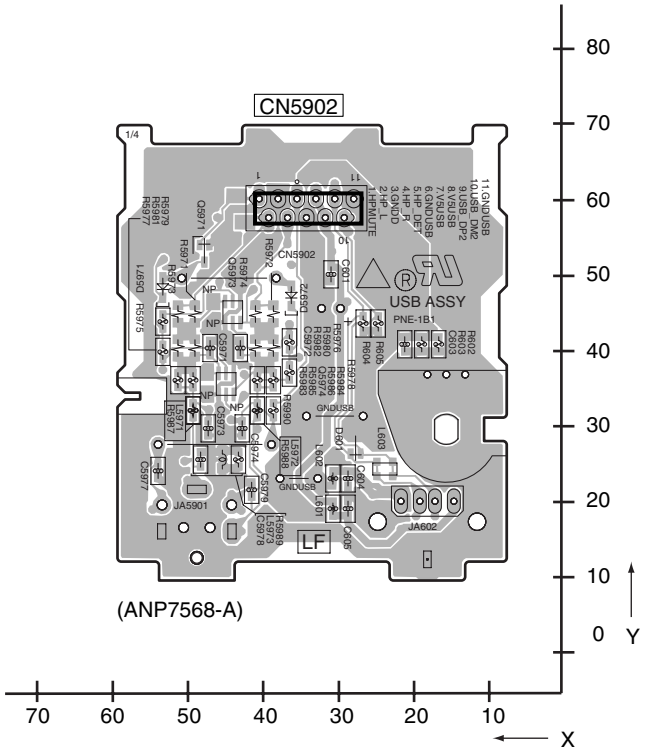
SIDE B

SIDE B

D DISPLAY ASSY



E USB ASSY



D E

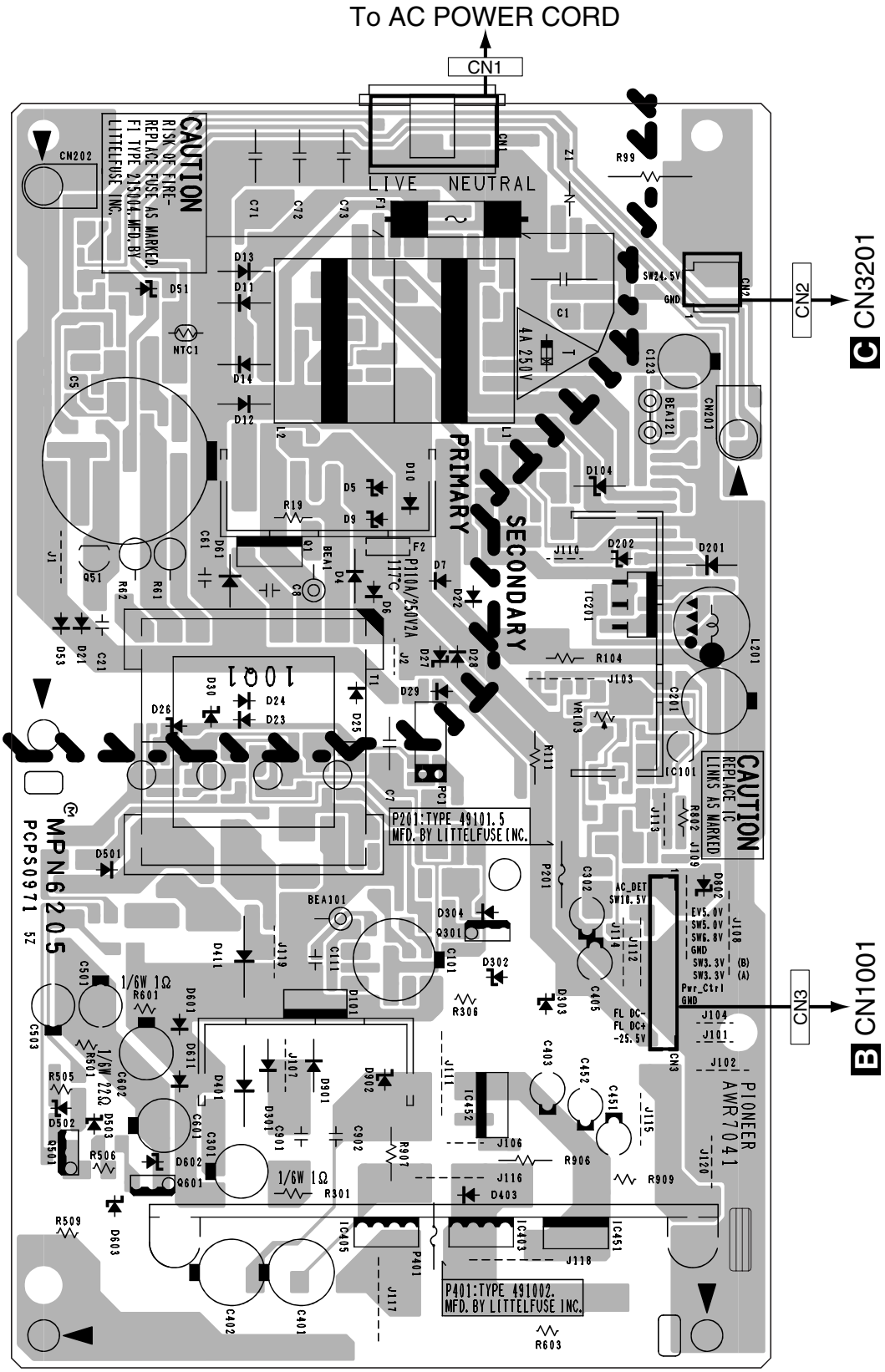
5 6 7 8

4.6 POWER SUPPLY UNIT

SIDE A

SIDE A

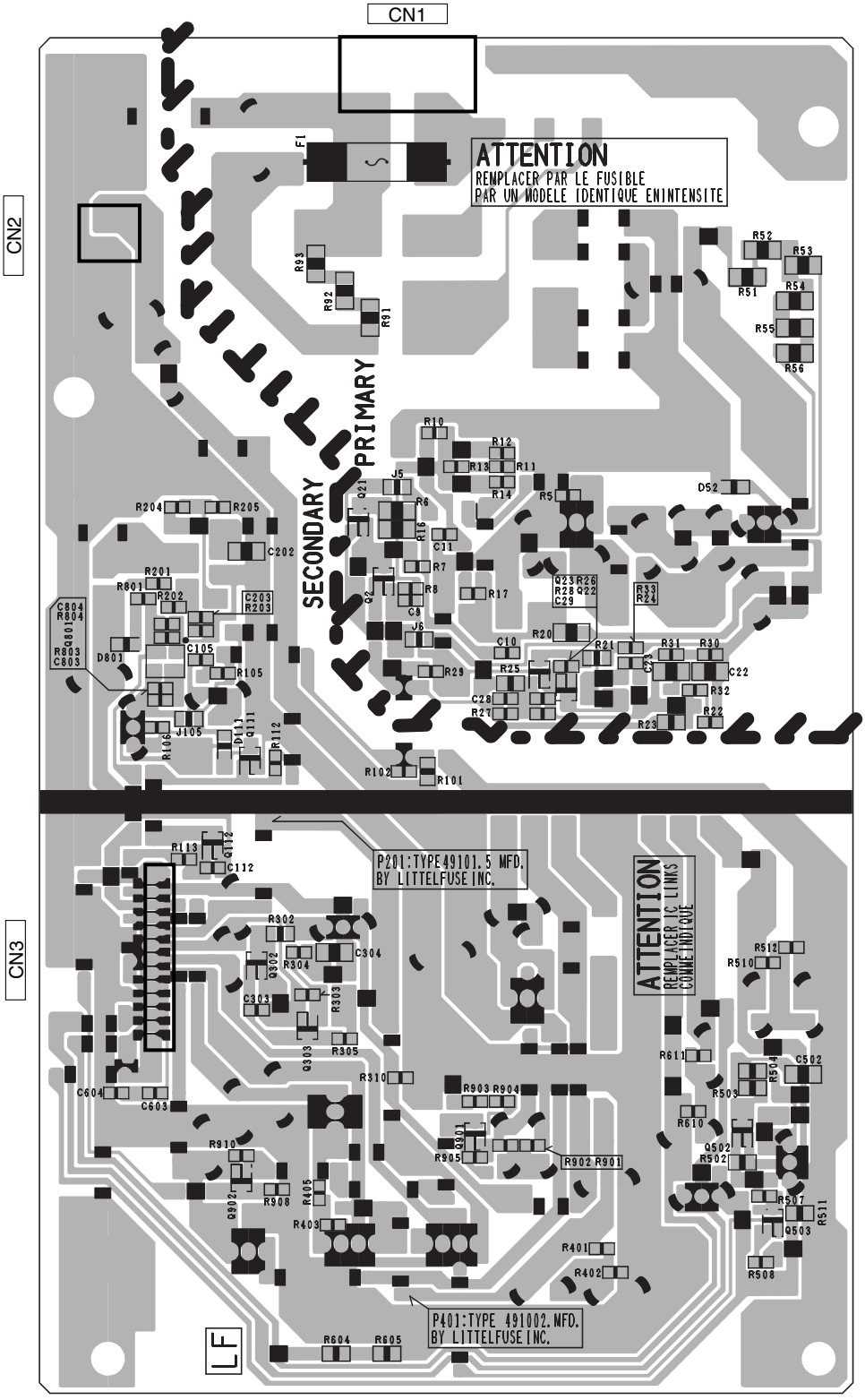
G POWER SUPPLY UNIT



SIDE B

SIDE B

G POWER SUPPLY UNIT



G

G

5. PCB PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω	→ *56 x 10[1]* →	*561*	*RD1/4PU 5 6 1 J*
47k Ω	→ *47 x 10[3]* →	*473*	*RD1/4PU 4 7 3 J*
0.5 Ω	→	*R50*	*RN2H R 5 0 K*
1 Ω	→	*1R0*	*RS1P 1 R 0 K*

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω	→ *562 x 10[1]* →	*5621*	*RN1/4PC 5 6 2 1 F*

- *Meaning of the figures and others in the parentheses in the parts list.*

Example) IC 301 is on the point (face A, 91 of x-axis, and 111 of y-axis) of the corresponding PC board.

IC 301 (A, 91, 111) IC NJM2068V

LIST OF ASSEMBLIES

Mark	No.	Description	Part No.
	1	LOAB ASSY	VWG2346
	1	DAMP ASSY	AWK7931
	1	DVD MAIN ASSY (XV-DV353)	AWM8025
	1	DVD MAIN ASSY (XV-DV360)	AWM8026
NSP	1	COMPLEX ASSY	AWM8033
	2	DISPLAY ASSY	AWU8289
	2	USB ASSY	AWU8290
NSP	1	JACK ASSY	AWM8034
	2	EUROSCART ASSY	AWU8291
⚠	1	POWER SUPPLY UNIT	AWR7041
	1	FM/AM TUNER UNIT	AXX7170

■ CONTRAST OF PCB ASSEMBLIES

B DVD MAIN ASSY

AWM8025 and AWM8026 are constructed the same except for the following :

Mark	Symbol and Description	AWM8025	AWM8026
	R5514	RS1/16S683J	RS1/16S223J
	R5516	RS1/16S153J	RS1/16S473J

■ PCB PARTS LIST

Mark	No.	Description	Part No.
		A LOAB ASSY	
		MISCELLANEOUS	
	S 101		VSK1011
	CN602	CONNECTOR	S2B-PH-K
	CN601	CONNECTOR	S5B-PH-K
		B DVD MAIN ASSY	
		MISCELLANEOUS	
	IC 101	(A,41,32) 6CH DRIVER IC	BD7995EFS
	IC 201	(A,77,112) DVD IC	MT1389FE/H-L
	IC 202	(A,110,99) SD-RAM(64M)	HY57V641620ETP-H
	IC 203	(A,72,77) FLASH ROM	AYW7096
		FLASH MEMORY IC	S29AL016D70TFI010
	IC 204	(A,93,79) EEPROM	S-24CS04AFJ
	IC 401	(A,103,145) DVD VIDEO AMP IC	MM1758XF
	IC 771	(A,34,50) LOAD SWITCHING	AAT4618IGV-0.5-1
	IC 781	(A,51,50) REGULATOR IC	NJM2845DL1-05
	IC 931	(A,102,195) HDMI IC	MT1392E/C-L
	IC 981	(A,84,160) REGULATOR IC	NJM2872BF05
	IC 1101	(A,30,109) REGULATOR IC	NJM2846DL3-18
	IC 3001	(A,41,151) IC	TC4052BFN
	IC 3003	(A,23,145) AD CONVERTER IC	AK5358ET
	IC 3004	(A,25,132) IC	TC7WU04FU
	IC 3005	(A,42,126) IC	TC74VHC157FTS1
	IC 5501	(A,83,44) SYSTEM CONTROL MICON	PDC133A
	IC 5502	(A,111,37) EEPROM	S-93C46BD0I-J8T1
	IC 5701	(A,72,168) RDS DECORDER IC	LC72725M

Mark No.	Description	Part No.
Q 304	(A,13,35) TRANSISTOR	2SC4154
Q 305	(A,14,41) NMOS FET TRANSISTOR	UM5K1N
Q 307	(A,11,61) CHIP TRANSISTOR	HN1A01F
Q 308	(A,16,61) CHIP TRANSISTOR	HN1A01F
Q 491	(A,46,206) TRANSISTOR	RT1N241M
Q 933	(A,114,212) TRANSISTOR	RT1N144M
Q 934	(A,115,216) CHIP TR (PNP X 2)	UMB1N
Q 1201	(A,23,101) TRANSISTOR	RT1N141M-11
Q 1202	(A,31,92) CHIP TRANSISTOR	RSR015P03
Q 1301	(A,10,107) TRANSISTOR(SC-70)	2SA1602A
Q 1302	(A,16,110) TRANSISTOR	2SA1577
Q 1303	(A,10,97) TRANSISTOR	2SC4154
Q 1304	(A,22,112) TRANSISTOR	2SC4154
Q 1402	(A,110,25) TRANSISTOR(SC-70)	2SA1602A
Q 1413	(A,106,21) TRANSISTOR	RT1N241M
Q 3005	(A,42,140) TRANSISTOR	RT3AMMM
Q 3951	(A,46,65) TRANSISTOR	RT1N241M
Q 5525	(A,58,62) DIGITAL TR(SC-70)	RT1N431M
Q 5703	(A,74,187) TRANSISTOR	RT3CLLM
D 802	(A,60,27) DIODE	MA111
D 933	(A,112,204) DIODE	UDZS5R1(B)
D 1201	(A,24,88) DIODE	MA111
D 1403	(A,110,30) DIODE	MC2846-11
D 1415	(A,103,22) DIODE	UDZS4R7(B)
L 761	(A,50,98) COIL	VTH1047
L 772	(A,39,50) CHIP SOLID INDUCTOR	ATL7002
L 931	(A,95,171) CHIP BEADS	ATL7010
L 932	(A,97,216) COIL	ATH7022
L 933	(A,100,216) COIL	ATH7022
L 934	(A,102,216) COIL	ATH7022
L 935	(A,105,216) COIL	ATH7022
L 936	(A,93,171) CHIP BEADS	ATL7010
L 937	(A,100,169) CHIP BEADS	ATL7010
L 1305	(A,20,108) INDUCTOR	CTF1395
L 1501	(A,58,44) AXIAL INDUCTOR	LAU220J
L 3951	(A,40,65) INDUCTOR	CTF1346
L 3952	(A,38,65) INDUCTOR	CTF1346
JA 403	(A,20,232) JACK	XKB3060
JA 931	HDMI CONNECTOR	AKP7210
X 201	(A,75,140) CRYSTAL RESONATOR (27MHz)	VSS1168
X 3004	(A,24,123) CRYSTAL RESONATOR (12.288MHz)	VSS1140
X 5501	(A,64,44) CERAMIC RESONATOR (10MHz)	ASS7034
X 5701	(A,74,157) CRYSTAL RESONATOR (4.332MHz)	ASS7004
CN101	(A,21,41) CONNECTOR	VKN2045
CN102	(A,19,18) 12P CONNECTOR	VKN1243
CN103	(A,20,57) 4P CONNECTOR	VKN1235
CN104	(A,46,10) CONNECTOR POST	B5B-PH
CN451	(A,65,182) CONNECTOR	CKS3388
CN1001	CONNECTOR	B13B-PH
CN3001	(A,8,157) 19P RECEPTACLE	AKP7199
CN3002	(A,8,193) 19P RECEPTACLE	AKP7199
CN5501	(A,114,53) CONNECTOR	CKS3372
CN5601	(A,29,56) CONNECTOR	CKS3376
CN5602	(A,85,12) CONNECTOR	CKS3378
CN5701	(A,86,179) CONNECTOR	CKS3376
2	PCB BINDER	VEF1040

RESISTORS

Mark No.	Description	Part No.
R 131	(A,28,24)	RS1/10S4R7J
R 132	(A,28,26)	RS1/10S4R7J
R 133	(A,28,28)	RS1/10S4R7J
R 134	(A,28,30)	RS1/10S4R7J
R 135	(A,28,32)	RS1/10S4R7J
R 136	(A,28,34)	RS1/10S4R7J
R 151	(A,51,37)	RS1/10S1R0J
R 152	(A,51,41)	RS1/10S1R8J
R 153	(A,49,37)	RS1/10S1R0J
R 154	(A,49,41)	RS1/10S1R8J
R 201	(A,50,76)	RS1/16S152J
R 202	(A,53,76)	RS1/16S223J
R 204	(A,51,79)	RS1/16S223J
R 205	(A,55,79)	RS1/16S513J
R 206	(A,56,76)	RS1/16S513J
R 212	(A,56,101)	RS1/16S103J
R 213	(A,56,102)	RS1/16S103J
R 215	(A,80,86)	RS1/16S332J
R 216	(A,79,89)	RS1/16S682J
R 218	(A,86,81)	RS1/16S103J
R 219	(A,86,82)	RS1/16S103J
R 221	(A,76,89)	RS1/16S330J
R 222	(A,92,87)	RS1/16S330J
R 223	(A,91,87)	RS1/16S330J
R 224	(A,73,89)	RS1/16S330J
R 225	(A,99,99) CHIP RESISTOR ARRAY	RAB4C330J
R 226	(A,99,102)	RS1/16S0R0J
R 227	(A,99,103)	RS1/16S330J
R 228	(A,99,105)	RS1/16S330J
R 229	(A,99,106)	RS1/16S330J
R 230	(A,86,134)	RS1/16S103J
R 233	(A,68,92)	RS1/16S0R0J
R 234	(A,79,86)	RS1/16S330J
R 235	(A,77,86)	RS1/16S472J
R 237	(A,77,89)	RS1/16S330J
R 240	(A,88,147)	RS1/16S0R0J
R 241	(A,83,134)	RS1/16S330J
R 242	(A,83,138)	RS1/16S330J
R 243	(A,81,134)	RS1/16S100J
R 244	(A,88,134)	RS1/16S330J
R 245	(A,88,138)	RS1/16S330J
R 246	(A,86,138)	RS1/16S330J
R 247	(A,88,156)	RS1/16S0R0J
R 248	(A,81,138)	RS1/16S330J
R 251	(A,70,134)	RS1/16S104J
R 252	(A,72,130)	RS1/16S0R0J
R 253	(A,73,134)	RS1/16S681J
R 254	(A,67,133)	RS1/16S754J
R 255	(A,61,134)	RS1/16S104J
R 256	(A,57,131)	RS1/16S153J
R 257	(A,74,130)	RS1/16S0R0J
R 258	(A,80,89)	RS1/16S330J
R 259	(A,82,87)	RS1/16S330J
R 260	(A,83,87)	RS1/16S330J
R 261	(A,95,87)	RS1/16S330J
R 262	(A,85,86)	RS1/16S330J
R 263	(A,86,86)	RS1/16S330J
R 264	(A,110,122) CHIP RESISTOR ARRAY	RAB4C330J
R 265	(A,104,118) CHIP RESISTOR ARRAY	RAB4C330J

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	R 266	(A,99,115)	RS1/16S0R0J		R 1403	(A,112,27)	RS1/16S473J
	R 267	(A,110,115) CHIP RESISTOR ARRAY	RAB4C330J		R 1404	(A,112,30)	RS1/16S393J
A	R 269	(A,91,136)	RS1/16S0R0J		R 1415	(A,100,22)	RS1/16S182J
	R 271	(A,104,113) CHIP RESISTOR ARRAY	RAB4C330J		R 3009	(A,48,153)	RS1/16S102J
	R 272	(A,96,87)	RS1/16S333J		R 3010	(A,34,153)	RS1/16S102J
	R 279	(A,89,134) CHIP RESISTOR	RS1/16S2201F		R 3011	(A,47,159)	RS1/16S223J
	R 284	(A,60,80)	RS1/16S103J		R 3012	(A,34,155)	RS1/16S223J
	R 291	(A,72,86)	RS1/16S332J		R 3013	(A,48,156)	RS1/16S223J
	R 292	(A,73,85)	RS1/16S682J		R 3014	(A,34,156)	RS1/16S223J
	R 293	(A,93,84)	RS1/16S332J		R 3015	(A,48,148)	RS1/16S223J
	R 294	(A,90,84)	RS1/16S682J		R 3016	(A,34,152)	RS1/16S223J
	R 313	(A,16,39)	RS1/16S104J		R 3017	(A,48,150)	RS1/16S223J
	R 314	(A,15,37)	RS1/16S103J		R 3018	(A,34,150)	RS1/16S223J
B	R 315	(A,12,37)	RS1/16S103J		R 3019	(A,48,151)	RS1/16S272J
	R 318	(A,12,39)	RS1/16S104J		R 3020	(A,37,157)	RS1/16S272J
	R 321	(A,19,61)	RS1/16S4R7J		R 3021	(A,45,140)	RS1/16S224J
	R 322	(A,14,61)	RS1/16S4R7J		R 3022	(A,37,143)	RS1/16S224J
	R 325	(A,10,57)	RS1/16S4R7J		R 3023	(A,37,138)	RS1/16S102J
	R 326	(A,15,57)	RS1/16S4R7J		R 3024	(A,39,143)	RS1/16S102J
	R 401	(A,109,138)	RS1/16S103J		R 3025	(A,45,136)	RS1/16S102J
	R 411	(A,96,131)	RS1/16S1500F		R 3026	(A,44,136)	RS1/16S102J
	R 412	(A,100,131)	RS1/16S1500F		R 3027	(A,48,154)	RS1/16S473J
	R 413	(A,93,130)	RS1/16S1500F		R 3039	(A,36,138)	RS1/16S153J
	R 414	(A,103,131)	RS1/16S1500F		R 3040	(A,42,144)	RS1/16S153J
C	R 415	(A,107,130)	RS1/16S1500F		R 3048	(A,17,137)	RS1/16S182J
	R 416	(A,110,130)	RS1/16S1500F		R 3049	(A,22,139)	RAB4C101J
	R 424	(A,19,209)	RS1/10S75R0F		R 3052	(A,22,134)	RS1/16S0R0J
	R 491	(A,49,206)	RS1/16S103J		R 3053	(A,31,131)	RS1/16S101J
	R 767	(A,51,104)	RS1/16S153J		R 3054	(A,31,128)	RS1/16S101J
	R 768	(A,52,101)	RS1/16S153J		R 3055	(A,27,129)	RS1/16S105J
	R 769	(A,51,103)	RS1/16S330J		R 3056	(A,23,129)	RS1/16S101J
	R 770	(A,52,100)	RS1/16S330J		R 3057	(A,27,150)	RS1/16S0R0J
	R 771	(A,37,50)	RS1/16S221J		R 3060	(A,29,143)	RS1/16S0R0J
	R 772	(A,31,48)	RS1/16S104J		R 3061	(A,37,130)	RS1/16S221J
	R 801	(A,54,29)	RS1/16S472J		R 3062	(A,35,125)	RS1/16S221J
D	R 906	(A,91,194)	RS1/16S100J		R 3063	(A,34,122)	RS1/16S221J
	R 911	(A,91,191)	RS1/16S100J		R 3065	(A,47,126)	RS1/16S221J
	R 914	(A,114,184)	RS1/16S103J		R 3066	(A,35,118)	RS1/16S101J
	R 915	(A,116,191)	RS1/16S102J		R 3073	(A,18,139)	RS1/16S332J
	R 931	(A,102,184)	RS1/16S0R0J		R 3081	(A,10,164)	RS1/16S105J
	R 933	(A,92,199)	RS1/16S561J		R 3082	(A,10,163)	RS1/16S105J
	R 934	(A,92,203) CHIP RESISTOR	RS1/16S5100F		R 3915	(A,69,200)	RS1/16S473J
	R 959	(A,117,214)	RS1/16S472J		R 3951	(A,43,65)	RS1/16S473J
	R 960	(A,117,217)	RS1/16S272J		R 3952	(A,35,65)	RS1/16S473J
	R 961	(A,113,219)	RS1/16S472J		R 3955	(A,50,65)	RS1/16S182J
	R 962	(A,115,219)	RS1/16S272J		R 5501	(A,67,58)	RAB4C221J
E							
	R 966	(A,110,206)	RS1/16S473J		R 5505	(A,67,55)	RS1/16S221J
	R 970	(A,112,209)	RS1/16S102J		R 5506	(A,67,54)	RS1/16S221J
	R 973	(A,109,209)	RS1/16S0R0J		R 5507	(A,67,53)	RS1/16S221J
	R 1101	(A,27,97)	RS1/16S221J		R 5508	(A,62,56)	RS1/16S222J
	R 1201	(A,19,91)	RS1/16S103J		R 5509	(A,67,61)	RS1/16S0R0J
	R 1202	(A,24,87)	RS1/16S474J		R 5510	(A,62,53)	RS1/16S473J
	R 1301	(A,9,102)	RS1/16S473J		R 5514	(A,62,36)	RS1/16S683J
	R 1302	(A,9,100)	RS1/16S392J		R 5515	(A,62,41)	RS1/16S473J
	R 1303	(A,16,113)	RS1/16S473J		R 5516	(A,62,38)	RS1/16S153J
	R 1304	(A,19,112)	RS1/10S561J		R 5517	(A,66,35)	RAB4C221J
F							
	R 1306	(A,25,109)	RS1/16S103J		R 5518	(A,62,35)	RS1/16S105J
	R 1307	(A,7,97)	RS1/16S472J		R 5519	(A,62,32)	RS1/16S103J
	R 1401	(A,114,27)	RS1/16S392J		R 5521	(A,66,33)	RS1/16S221J
	R 1402	(A,114,30)	RS1/16S332J		R 5527	(A,67,25)	RAB4C221J

Mark No.	Description	Part No.
R 5531	(A,71,25)	RS1/16S0R0J
R 5541	(A,87,25)	RAB4C221J
R 5543	(A,94,10)	RS1/16S0R0J
R 5544	(A,81,22)	RS1/16S0R0J
R 5546	(A,84,22)	RS1/16S103J
R 5547	(A,84,21)	RS1/16S103J
R 5548	(A,100,29)	RAB4C221J
R 5557	(A,100,36)	RAB4C221J
R 5558	(A,106,40)	RS1/16S473J
R 5559	(A,112,41)	RS1/16S473J
R 5562	(A,100,39)	RS1/16S221J
R 5563	(A,104,46)	RS1/16S103J
R 5564	(A,100,40)	RS1/16S221J
R 5565	(A,100,42)	RS1/16S221J
R 5566	(A,100,45)	RAB4C221J
R 5569	(A,66,39)	RS1/16S221J
R 5570	(A,100,51)	RAB4C221J
R 5574	(A,95,64)	RS1/16S104J
R 5577	(A,100,60)	RAB4C221J
R 5581	(A,98,64)	RS1/16S221J
R 5582	(A,96,64)	RS1/16S221J
R 5583	(A,92,64)	RS1/16S103J
R 5584	(A,90,64)	RS1/16S221J
R 5590	(A,80,64)	RAB4C221J
R 5597	(A,82,63)	RS1/16S153J
R 5708	(A,75,193)	RS1/16S0R0J
R 5712	(A,78,184)	RS1/16S272J
R 5713	(A,78,190)	RS1/16S272J
R 5943	(A,73,212)	RS1/16S0R0J
R 9401	(A,16,196)	RS1/16S0R0J

CAPACITORS

C 101	(A,40,18)		CEAT101M10
C 102	(A,40,22)		CKSRYB105K10
C 103	(A,48,29)		CKSRYB105K10
C 104	(A,49,34)		CKSRYB105K10
C 121	(A,48,32)		CKSRYB105K6R3
C 131	(A,33,41)		CKSRYB104K16
C 140	(A,16,15)		CKSRYB105K6R3
C 144	(A,32,32)		CKSRYB222K50
C 145	(A,34,31)		CKSRYB222K50
C 146	(A,34,34)		CKSRYB222K50
C 151	(A,49,26)		CKSRYB103K50
C 152	(A,49,23)		CKSRYB103K50
C 153	(A,46,21)		CKSRYB103K50
C 161	(A,32,38)		CKSRYB102K50
C 200	(A,58,111)		CKSRYB104K16
C 201	(A,54,88)		CEAT221M6R3
C 202	(A,45,112)		CEAT221M6R3
C 203	(A,46,100)	ELECT. CAPACITOR	CEAT470M35
C 204	(A,54,113)		CKSRYB104K16
C 205	(A,54,111)		CKSRYB104K16
C 206	(A,52,108)	ELECT. CAPACITOR	CEAT470M35
C 207	(A,55,116)		CKSRYB104K16
C 208	(A,54,76)		CKSRYB222K50
C 209	(A,51,76)		CKSRYB104K16
C 210	(A,53,79)		CKSRYB222K50
C 211	(A,56,79)		CCSRCH101J50
C 212	(A,57,76)		CCSRCH101J50
C 213	(A,54,115)		CKSRYB104K16
C 215	(A,46,106)	ELECT. CAPACITOR	CEAT470M35
C 216	(A,58,105)		CKSRYB104K16
C 217	(A,59,100)		CKSRYB104K16
C 218	(A,58,108)		CKSRYB104K16
C 219	(A,58,109)		CKSRYB562K50
C 220	(A,63,93)		CKSRYB104K16
C 223	(A,63,146)		CEAT100M50
C 224	(A,75,93)		CKSRYB104K16
C 225	(A,76,93)		CKSRYB104K16
C 226	(A,88,87)		CKSRYB103K50
C 227	(A,93,87)		CCSRCH221J50
C 228	(A,78,134)		CKSRYB104K16
C 229	(A,89,92)		CKSRYB104K16
C 230	(A,94,99)		CKSRYB104K16
C 231	(A,95,104)		CKSRYB104K16
C 232	(A,95,106)		CKSRYB104K16
C 233	(A,96,111)		CKSRYB104K16
C 234	(A,95,113)		CKSRYB104K16
C 235	(A,95,116)		CKSRYB104K16
C 236	(A,95,118)		CKSRYB104K16
C 237	(A,103,126)		CEAT221M6R3
C 238	(A,75,130)		CKSRYB104K16
C 239	(A,81,131)		CKSRYB104K16
C 241	(A,69,147)		CEAT100M50
C 242	(A,75,147)		CEAT100M50
C 243	(A,94,127)		CKSRYB104K16
C 244	(A,95,123)		CKSRYB104K16
C 245	(A,88,131)		CKSRYB105K6R3
C 246	(A,87,130)		CKSRYB104K16
C 247	(A,84,131)		CKSRYB104K16
C 248	(A,84,134)		CKSRYB104K16
C 250	(A,102,122)		CKSRYB104K16
C 251	(A,70,135)		CCSRCH9R0D50
C 252	(A,74,135)		CCSRCH120J50
C 254	(A,67,135)		CKSRYB102K50
C 255	(A,60,137)		CKSRYB474K10
C 256	(A,64,140)		CEAT100M50
C 258	(A,64,135)		CKSRYB473K25
C 259	(A,64,133)		CKSRYB473K25
C 260	(A,70,131)		CKSRYB104K16
C 261	(A,76,131)		CKSRYB104K16
C 262	(A,81,148)		CEAT100M50
C 264	(A,66,131)		CKSRYB104K16
C 265	(A,57,135)		CCSRCH220J50
C 266	(A,68,131)		CKSRYB104K16
C 267	(A,58,135)		CKSRYB102K50
C 268	(A,62,131)		CKSRYB104K16
C 269	(A,60,131)		CKSRYB333K16
C 271	(A,64,130)		CKSRYB104K16
C 272	(A,59,131)		CKSRYB104K16
C 273	(A,64,131)		CKSRYB104K16
C 281	(A,113,85)		CEAT221M6R3
C 282	(A,109,84)		CKSRYB105K6R3
C 283	(A,117,109)		CKSRYB104K16
C 284	(A,102,98)		CKSRYB104K16
C 285	(A,101,93)		CKSRYB104K16
C 286	(A,117,90)		CKSRYB104K16
C 287	(A,117,94)		CKSRYB104K16
C 288	(A,117,99)		CKSRYB104K16
C 289	(A,86,77)		CKSRYB105K6R3

Mark	No.	Description	Part No.
	C 290	(A,93,75)	CKSRYB104K16
	C 296	(A,84,77)	CKSRYB102K50
A	C 309	(A,10,66) ELECT. CAPACITOR	CEAT470M35
	C 310	(A,16,66) ELECT. CAPACITOR	CEAT470M35
	C 343	(A,58,124)	CKSRYB105K6R3
	C 344	(A,48,117)	CKSRYB105K6R3
	C 345	(A,48,118)	CKSRYB105K6R3
	C 346	(A,55,122)	CKSRYB105K6R3
	C 347	(A,55,120)	CKSRYB105K6R3
	C 371	(A,15,44)	CKSRYB104K16
	C 372	(A,26,46)	CKSRYB104K16
	C 374	(A,10,49) ELECTR.CAPACITOR	CEAT101M6R3
	C 401	(A,92,151)	CEAT101M16
B	C 402	(A,91,147)	CKSRYB104K16
	C 404	(A,92,144)	CEAT101M16
	C 405	(A,103,138)	CKSRYB104K16
	C 411	(A,97,137)	CKSRYB104K16
	C 412	(A,101,136)	CKSRYB105K6R3
	C 413	(A,95,137)	CKSRYB105K6R3
	C 414	(A,104,136)	CKSRYB105K6R3
	C 415	(A,107,135)	CKSRYB104K16
	C 416	(A,111,135)	CKSRYB104K16
	C 429	(A,18,203) ELECT. CAPACITOR	CEAT102M6R3
	C 771	(A,35,53)	CKSQYB105K16
C	C 773	(A,31,51)	CKSRYB104K16
	C 781	(A,42,45)	CEAT100M50
	C 782	(A,46,58)	CKSQYB225K10
	C 931	(A,96,186)	CKSRYB104K16
	C 932	(A,97,180) ELECT. CAPACITOR	CEAT470M35
	C 933	(A,94,185)	CKSRYB104K16
	C 934	(A,94,187)	CKSRYB102K50
	C 935	(A,96,166)	CKSRYB104K16
	C 936	(A,113,189)	CKSRYB104K16
	C 942	(A,102,185)	CKSRYB104K16
	C 943	(A,108,185)	CKSRYB104K16
D	C 944	(A,92,201)	CKSRYB104K16
	C 945	(A,110,202)	CKSRYB562K50
	C 946	(A,108,204)	CKSRYB104K16
	C 951	(A,109,210)	CKSRYB104K16
	C 952	(A,109,218)	CEAT100M50
	C 953	(A,91,180) ELECT. CAPACITOR	CEAT470M35
	C 954	(A,91,185)	CKSRYB104K16
	C 955	(A,94,166)	CKSRYB104K16
	C 956	(A,91,187)	CKSRYB102K50
	C 982	(A,84,164)	CKSQYB225K10
	C 983	(A,80,161)	CKSQYB105K16
E	C 984	(A,84,157)	CKSRYB104K16
	C 985	(A,100,165)	CKSRYB104K16
	C 987	(A,100,172)	CKSRYB102K50
	C 1101	(A,27,101)	CKSRYB105K6R3
	C 1103	(A,30,97) ELECT. CAPACITOR	CEAT470M35
	C 1201	(A,24,97)	CKSRYB105K6R3
	C 1204	(A,27,88)	CKSRYB563K16
	C 1301	(A,25,112)	CKSRYB105K6R3
	C 1501	(A,61,50)	CKSRYB103K50
	C 1502	(A,61,44)	CKSRYB104K16
F	C 1505	(A,58,54)	CEAT101M10
	C 3001	(A,44,157)	CKSRYB103K50
	C 3011	(A,20,182)	CEAT100M50
	C 3012	(A,20,188)	CEAT100M50
	C 3015	(A,39,170)	CEAT100M50
	C 3016	(A,39,164)	CEAT100M50
	C 3019	(A,63,165)	CEAT100M50
	C 3020	(A,62,172)	CEAT100M50
	C 3021	(A,29,138)	CKSRYB104K16
	C 3022	(A,42,143)	CKSRYB104K16
	C 3023	(A,31,135) ELECT. CAPACITOR	CEAT470M35
	C 3024	(A,40,136)	CEAT221M6R3
	C 3025	(A,33,141)	CEAT100M50
	C 3026	(A,33,147)	CEAT100M50
	C 3041	(A,19,161)	CEAT100M50
	C 3042	(A,22,151)	CKSRYB104K16
	C 3043	(A,27,158)	CEAT2R2M50
	C 3044	(A,24,151)	CKSRYB104K16
	C 3045	(A,20,155)	CEAT100M50
	C 3046	(A,20,151)	CKSRYB104K16
	C 3048	(A,17,139)	CKSRYB103K50
	C 3052	(A,25,134)	CKSRYB104K16
	C 3056	(A,23,127)	CCSRCH270J50
	C 3057	(A,27,127)	CCSRCH270J50
	C 3064	(A,43,130)	CKSRYB104K16
	C 3951	(A,41,73)	CEAT101M16
	C 3952	(A,35,73)	CEAT101M16
	C 5502	(A,57,35)	CEAT101M10
	C 5504	(A,62,57)	CKSRYB103K50
	C 5508	(A,62,54)	CKSRYB103K50
	C 5509	(A,68,50)	CKSRYB104K16
	C 5517	(A,68,41)	CKSRYB103K50
	C 5518	(A,66,38)	CKSRYB104K16
	C 5519	(A,62,33)	CKSRYB103K50
	C 5521	(A,63,28)	CKSRYB104K16
	C 5522	(A,64,33)	CKSRYB103K50
	C 5524	(A,62,65)	CEAT100M50
	C 5539	(A,84,25)	CKSRYB104K16
	C 5555	(A,99,32)	CKSRYB104K16
	C 5557	(A,116,38)	CKSRYB104K16
	C 5558	(A,106,36)	CCSRCH470J50
	C 5569	(A,100,48)	CKSRYB103K50
	C 5577	(A,100,57)	CKSRYB103K50
	C 5578	(A,101,62)	CKSRYB103K50
	C 5579	(A,93,64)	CKSRYB102K50
	C 5589	(A,85,63)	CKSRYB104K16
	C 5601	(A,72,6)	CKSRYB102K50
	C 5602	(A,77,6)	CKSRYB102K50
	C 5603	(A,81,6)	CKSRYB102K50
	C 5701	(A,79,172)	CCSRCH101J50
	C 5703	(A,78,176)	CCSRCH101J50
	C 5707	(A,75,185)	CKSRYB102K50
	C 5708	(A,72,182) ELECT. CAPACITOR	CEAT470M35
	C 5712	(A,74,161)	CCSRCH270J50
	C 5713	(A,74,174)	CKSRYB472K50
	C 5714	(A,70,161)	CCSRCH270J50
	C 5715	(A,70,163)	CKSRYB103K50
	C 5716	(A,68,174)	CCSRCH561J50
	C 5719	(A,81,168)	CEAT100M50
	C 5720	(A,63,161) ELECT. CAPACITOR	CEAT470M35

C DAMP ASSY

Mark	No.	Description	Part No.
		MISCELLANEOUS	
	IC	3101(A,22,84) 8CH PWM PROCESSOR IC	TAS5508BPAG
	IC	3191(A,99,139) OP-AMP IC	BA10358F
⚠	IC	3201(A,46,54) DIGITAL AMP IC	TAS5122DCA
⚠	IC	3301(A,46,84) DIGITAL AMP IC	TAS5122DCA
⚠	IC	3401(A,46,114) DIGITAL AMP IC	TAS5122DCA
	IC	3601(A,97,15) DUAL OP-AMP	NJM4565M
	IC	3901(A,11,27) DUAL OP-AMP	NJM4565M
	Q	3131(A,37,140) TRANSISTOR	2SA1036K
	Q	3132(A,36,132) DIGITAL TR(SC-70)	RT1N431M
	D	3101(A,28,57) DIODE	MC2846-11
	D	3131(A,41,137) DIODE	UDZS18(B)
	D	3191(A,21,124) DIODE	UDZS4R7(B)
	L	3201(A,70,37) INDUCTORS	ATH7019
	L	3202(A,70,54) INDUCTORS	ATH7019
	L	3301(A,70,70) INDUCTORS	ATH7019
	L	3302(A,70,87) INDUCTORS	ATH7019
	L	3401(A,70,103) INDUCTORS	ATH7019
	L	3402(A,70,120) INDUCTORS	ATH7019
	JA	3111JACK	XKB3062
	X	3101(A,18,67) CRYSTAL RESONATOR (13.5 MHz)	ASS7062
	CN	3101(A,41,8) 19P PLUG	AKM7077
	CN	3102(A,77,8) 19P PLUG	AKM7077
	CN	3201(A,84,140) 2P CONNECTOR	B2P-VH
	CN	3211(A,116,96) 6CH SPEAKER JACK(V0)	AKE7121
	2	PCB BINDER	VEF1040
		RESISTORS	
	R	3101(A,14,95)	RS1/16S221J
	R	3102(A,14,92)	RS1/16S221J
	R	3103(A,12,58)	RS1/16S4R7J
	R	3104(A,13,78)	RAB4C221J
	R	3106(A,19,73)	RS1/16S105J
	R	3107(A,22,72)	RAB4C470J
	R	3108(A,26,72)	RAB4C470J
	R	3110(A,29,72)	RS1/16S0R0J
	R	3111(A,28,94)	RS1/16S220J
	R	3112(A,18,97)	RS1/16S470J
	R	3113(A,15,96)	RS1/16S3R3J
	R	3114(A,28,54)	RS1/16S103J
	R	3131(A,41,140)	RS1/16S473J
	R	3132(A,39,136)	RS1/10S123J
	R	3133(A,39,133)	RS1/16S102J
	R	3134(A,41,133)	RS1/16S222J
	R	3141(A,100,36)	RS1/16S331J
	R	3142(A,101,30)	RS1/16S331J
	R	3151(A,28,17)	RAB4C103J
	R	3152(A,36,17)	RAB4C222J
	R	3182(A,16,57)	RS1/16S0R0J
	R	3191(A,108,137) RESISTOR (0.1OHM,2W)	ACN7112
	R	3192(A,101,135)	RS1/16S103J
	R	3193(A,92,140)	RS1/16S103J
	R	3194(A,97,133)	RS1/16S104J
	R	3195(A,92,141)	RS1/16S104J
	R	3196(A,93,133)	RS1/16S222J
	R	3197(A,90,132)	RS1/16S103J
⚠	R	3199(A,94,135)	RS1/16S8R2J
	R	3204(A,33,51)	RS1/16S221J
	R	3205(A,34,56)	RS1/16S103J
	R	3206(A,36,60)	RS1/16S101J
	R	3207(A,35,60)	RS1/16S473J
	R	3208(A,38,60)	RS1/16S472J
⚠	R	3211(A,60,46) RESISTOR (2.7 OHM)	ACN7141
⚠	R	3212(A,60,60) RESISTOR (2.7 OHM)	ACN7141
⚠	R	3213(A,60,48) RESISTOR (2.7 OHM)	ACN7141
⚠	R	3214(A,60,62) RESISTOR (2.7 OHM)	ACN7141
	R	3215(A,64,43) CHIP RESISTOR	RS1/8S1R5J
	R	3216(A,64,57) CHIP RESISTOR	RS1/8S1R5J
	R	3217(A,64,52) CHIP RESISTOR	RS1/8S1R5J
	R	3218(A,64,66) CHIP RESISTOR	RS1/8S1R5J
	R	3223(A,39,43)	RS1/10S821J
	R	3224(A,39,66)	RS1/10S821J
	R	3225(A,39,41)	RS1/10S821J
	R	3226(A,39,68)	RS1/10S821J
⚠	R	3227(A,86,35)	RS1/10S3R3J
⚠	R	3228(A,86,51)	RS1/10S3R3J
	R	3231(A,104,70)	RS1/10S472J
	R	3232(A,107,70)	RS1/10S472J
	R	3233(A,100,70)	RS1/10S472J
	R	3234(A,110,70)	RS1/10S472J
⚠	R	3235(A,104,69)	RS1/16S1R0J
⚠	R	3236(A,107,69)	RS1/16S1R0J
⚠	R	3237(A,101,69)	RS1/16S1R0J
⚠	R	3238(A,110,69)	RS1/16S1R0J
⚠	R	3241(A,58,45)	RS1/10S180J
⚠	R	3242(A,58,59)	RS1/10S180J
⚠	R	3243(A,58,49)	RS1/10S180J
⚠	R	3244(A,58,63)	RS1/10S180J
	R	3304(A,33,80)	RS1/16S221J
	R	3305(A,34,86)	RS1/16S103J
	R	3306(A,36,90)	RS1/16S101J
	R	3307(A,35,90)	RS1/16S473J
	R	3308(A,38,90)	RS1/16S472J
⚠	R	3311(A,60,76) RESISTOR (2.7 OHM)	ACN7141
⚠	R	3312(A,60,90) RESISTOR (2.7 OHM)	ACN7141
⚠	R	3313(A,60,78) RESISTOR (2.7 OHM)	ACN7141
⚠	R	3314(A,60,92) RESISTOR (2.7 OHM)	ACN7141
	R	3315(A,64,73) CHIP RESISTOR	RS1/8S1R5J
	R	3316(A,64,87) CHIP RESISTOR	RS1/8S1R5J
	R	3317(A,64,82) CHIP RESISTOR	RS1/8S1R5J
	R	3318(A,64,96) CHIP RESISTOR	RS1/8S1R5J
	R	3323(A,39,73)	RS1/10S821J
	R	3324(A,39,96)	RS1/10S821J
	R	3325(A,39,71)	RS1/10S821J
	R	3326(A,39,98)	RS1/10S821J
⚠	R	3327(A,86,68)	RS1/10S3R3J
⚠	R	3328(A,86,84)	RS1/10S3R3J
	R	3331(A,94,98)	RS1/10S472J
	R	3332(A,94,84)	RS1/10S472J
	R	3333(A,94,94)	RS1/10S472J
	R	3334(A,94,108)	RS1/10S472J
⚠	R	3335(A,94,101)	RS1/16S1R0J
⚠	R	3336(A,94,81)	RS1/16S1R0J
⚠	R	3337(A,94,91)	RS1/16S1R0J
⚠	R	3338(A,94,111)	RS1/16S1R0J
⚠	R	3341(A,58,75)	RS1/10S180J
⚠	R	3342(A,58,89)	RS1/10S180J
⚠	R	3343(A,58,79)	RS1/10S180J
⚠	R	3344(A,58,93)	RS1/10S180J
	R	3404(A,33,110)	RS1/16S221J

Mark	No.	Description	Part No.
	R 3405(A,34,116)		RS1/16S103J
	R 3406(A,36,120)		RS1/16S101J
	R 3407(A,35,120)		RS1/16S473J
	R 3408(A,38,120)		RS1/16S472J
⚠	R 3411(A,60,106)	RESISTOR (2.7 OHM)	ACN7141
⚠	R 3412(A,60,120)	RESISTOR (2.7 OHM)	ACN7141
⚠	R 3413(A,60,108)	RESISTOR (2.7 OHM)	ACN7141
⚠	R 3414(A,60,122)	RESISTOR (2.7 OHM)	ACN7141
	R 3415(A,64,103)	CHIP RESISTOR	RS1/8S1R5J
	R 3416(A,64,117)	CHIP RESISTOR	RS1/8S1R5J
	R 3417(A,64,112)	CHIP RESISTOR	RS1/8S1R5J
	R 3418(A,64,126)	CHIP RESISTOR	RS1/8S1R5J
	R 3423(A,39,103)		RS1/10S821J
	R 3424(A,39,126)		RS1/10S821J
	R 3425(A,39,101)		RS1/10S821J
	R 3426(A,39,128)		RS1/10S821J
⚠	R 3427(A,86,101)		RS1/10S3R3J
⚠	R 3428(A,86,117)		RS1/10S3R3J
	R 3431(A,100,122)		RS1/10S472J
	R 3432(A,107,122)		RS1/10S472J
	R 3433(A,104,122)		RS1/10S472J
	R 3434(A,110,122)		RS1/10S472J
⚠	R 3435(A,101,124)		RS1/16S1R0J
⚠	R 3436(A,107,124)		RS1/16S1R0J
⚠	R 3437(A,104,124)		RS1/16S1R0J
⚠	R 3438(A,110,124)		RS1/16S1R0J
⚠	R 3441(A,58,105)		RS1/10S180J
⚠	R 3442(A,58,119)		RS1/10S180J
⚠	R 3443(A,58,109)		RS1/10S180J
⚠	R 3444(A,58,123)		RS1/10S180J
	R 3601(A,87,9)		RAB4C472J
	R 3605(A,87,17)		RS1/16S472J
	R 3606(A,107,17)		RS1/16S472J
	R 3607(A,90,13)		RS1/16S472J
	R 3608(A,104,13)		RS1/16S472J
	R 3609(A,91,18)		RS1/16S103J
	R 3610(A,103,18)		RS1/16S103J
	R 3611(A,90,14)		RS1/16S103J
	R 3612(A,104,14)		RS1/16S103J
⚠	R 3621(A,92,6)		RS1/16S8R2J
	R 3623(A,92,8)		RS1/16S222J
	R 3624(A,92,9)		RS1/16S222J
	R 3901(A,11,39)		RAB4C472J
	R 3905(A,17,35)		RS1/16S562J
	R 3906(A,6,35)		RS1/16S562J
	R 3907(A,15,35)		RS1/16S562J
	R 3908(A,7,35)		RS1/16S562J
	R 3909(A,16,32)		RS1/16S183J
	R 3910(A,6,32)		RS1/16S183J
	R 3911(A,13,32)		RS1/16S183J
	R 3912(A,9,32)		RS1/16S183J
	R 3913(A,11,43)		RS1/16S472J
	R 3914(A,7,42)		RS1/16S472J
	R 3915(A,12,41)		RS1/16S472J
	R 3916(A,8,43)		RS1/16S472J
⚠	R 3921(A,12,24)		RS1/16S8R2J
	R 3923(A,12,22)		RS1/16S103J
	R 3924(A,15,22)		RS1/16S103J

CAPACITORS

Mark	No.	Description	Part No.
	C 3101(A,16,92)		CKSRYB104K16
	C 3102(A,14,93)		CKSRYB103K50
	C 3103(A,11,94)		CKSRYB104K16
	C 3104(A,11,91)		CKSRYB104K16
	C 3105(A,14,90)		CKSRYB103K50
	C 3106(A,12,87)		CKSRYB104K16
	C 3107(A,12,86)		CKSRYB104K16
	C 3108(A,12,72)		CEVW100M10
	C 3109(A,12,84)		CKSRYB102K50
	C 3110(A,16,77)		CKSRYB104K16
	C 3111(A,12,64)		CEVW100M10
	C 3112(A,17,76)		CKSRYB104K16
	C 3113(A,17,74)		CCSRCH180J50
	C 3114(A,17,73)		CCSRCH150J50
	C 3115(A,28,76)		CKSRYB104K16
	C 3116(A,28,75)		CKSRYB104K16
	C 3117(A,26,66)		CEVW100M10
	C 3118(A,30,90)		CKSRYB104K16
	C 3119(A,25,94)		CKSRYB104K16
	C 3120(A,26,97)		CEVW100M10
	C 3141(A,101,36)		CCSRCH221J50
	C 3142(A,101,33)		CCSRCH221J50
	C 3151(A,18,20)		CKSRYB104K16
	C 3192(A,98,135)		CKSRYB104K25
	C 3201(A,40,45)		CKSQYB105K16
	C 3202(A,40,63)		CKSQYB105K16
	C 3203(A,35,54)		CKSRYB104K16
	C 3204(A,39,60)		CKSRYB104K16
	C 3211(A,59,42)		CKSQYB104K50
	C 3212(A,59,56)		CKSQYB104K50
	C 3213(A,59,52)		CKSQYB104K50
	C 3214(A,59,66)		CKSQYB104K50
	C 3215(A,65,46)		CKSRYB333K50
	C 3216(A,65,60)		CKSRYB333K50
	C 3217(A,65,48)		CKSRYB333K50
	C 3218(A,65,62)		CKSRYB333K50
	C 3221(A,91,43)	ELECT. CAPACITOR	CEAT102M25
	C 3223(A,86,37)		CKSRYB103K50
	C 3224(A,86,54)		CKSRYB103K50
	C 3225(A,86,48)		CKSRYB102K50
	C 3226(A,86,65)		CKSRYB102K50
	C 3227(A,49,45)		CKSRYB104K25
	C 3228(A,49,64)		CKSRYB104K25
	C 3231(A,85,45)		CFTLA474J50
	C 3232(A,85,62)		CFTLA474J50
	C 3233(A,102,83)		CKSRYB104K25
	C 3234(A,108,81)		CKSRYB104K25
	C 3235(A,102,81)		CKSRYB104K25
	C 3236(A,108,78)		CKSRYB104K25
	C 3237(A,104,66)		CKSRYB103K50
	C 3238(A,107,66)		CKSRYB103K50
	C 3239(A,101,66)		CKSRYB103K50
	C 3240(A,110,66)		CKSRYB103K50
	C 3241(A,56,44)		CKSRYB331K50
	C 3242(A,56,58)		CKSRYB331K50
	C 3243(A,56,50)		CKSRYB331K50
	C 3244(A,56,64)		CKSRYB331K50
	C 3301(A,40,75)		CKSQYB105K16
	C 3302(A,40,93)		CKSQYB105K16
	C 3303(A,35,84)		CKSRYB104K16

Mark	No.	Description	Part No.
C	3304(A,39,90)		CKSRYB104K16
C	3311(A,59,72)		CKSQYB104K50
C	3312(A,59,86)		CKSQYB104K50
C	3313(A,59,82)		CKSQYB104K50
C	3314(A,59,96)		CKSQYB104K50
C	3315(A,65,76)		CKSRYB333K50
C	3316(A,65,90)		CKSRYB333K50
C	3317(A,65,78)		CKSRYB333K50
C	3318(A,65,92)		CKSRYB333K50
C	3321(A,91,59)	ELECT. CAPACITOR	CEAT102M25
C	3323(A,86,70)		CKSRYB103K50
C	3324(A,86,87)		CKSRYB103K50
C	3325(A,86,81)		CKSRYB102K50
C	3326(A,86,98)		CKSRYB102K50
C	3327(A,49,75)		CKSRYB104K25
C	3328(A,49,94)		CKSRYB104K25
C	3331(A,85,78)		CFTLA474J50
C	3332(A,85,95)		CFTLA474J50
C	3333(A,102,99)		CKSRYB104K25
C	3334(A,107,92)		CKSRYB104K25
C	3335(A,102,96)		CKSRYB104K25
C	3336(A,107,95)		CKSRYB104K25
C	3337(A,94,104)		CKSRYB103K50
C	3338(A,94,78)		CKSRYB103K50
C	3339(A,94,88)		CKSRYB103K50
C	3340(A,94,114)		CKSRYB103K50
C	3341(A,56,74)		CKSRYB331K50
C	3342(A,56,88)		CKSRYB331K50
C	3343(A,56,80)		CKSRYB331K50
C	3344(A,56,94)		CKSRYB331K50
C	3401(A,40,105)		CKSQYB105K16
C	3402(A,40,123)		CKSQYB105K16
C	3403(A,35,114)		CKSRYB104K16
C	3404(A,39,120)		CKSRYB104K16
C	3411(A,59,102)		CKSQYB104K50
C	3412(A,59,116)		CKSQYB104K50
C	3413(A,59,112)		CKSQYB104K50
C	3414(A,59,126)		CKSQYB104K50
C	3415(A,65,106)		CKSRYB333K50
C	3416(A,65,120)		CKSRYB333K50
C	3417(A,65,108)		CKSRYB333K50
C	3418(A,65,122)		CKSRYB333K50
C	3421(A,91,125)	ELECT. CAPACITOR	CEAT102M25
C	3423(A,86,103)		CKSRYB103K50
C	3424(A,86,120)		CKSRYB103K50
C	3425(A,86,114)		CKSRYB102K50
C	3426(A,86,131)		CKSRYB102K50
C	3427(A,49,105)		CKSRYB104K25
C	3428(A,49,124)		CKSRYB104K25
C	3431(A,85,111)		CFTLA474J50
C	3432(A,85,128)		CFTLA474J50
C	3433(A,102,113)		CKSRYB104K25
C	3434(A,107,107)		CKSRYB104K25
C	3435(A,102,111)		CKSRYB104K25
C	3436(A,107,110)		CKSRYB104K25
C	3437(A,101,126)		CKSRYB103K50
C	3438(A,107,126)		CKSRYB103K50
C	3439(A,104,126)		CKSRYB103K50
C	3440(A,110,126)		CKSRYB103K50
C	3441(A,56,104)		CKSRYB331K50
C	3442(A,56,118)		CKSRYB331K50
C	3443(A,56,110)		CKSRYB331K50
C	3444(A,56,124)		CKSRYB331K50
C	3601(A,87,16)		CCSRCH331J50
C	3602(A,107,16)		CCSRCH331J50
C	3603(A,87,13)		CCSRCH331J50
C	3604(A,107,13)		CCSRCH331J50
C	3605(A,89,18)		CCSRCH151J50
C	3606(A,105,18)		CCSRCH151J50
C	3607(A,87,14)		CCSRCH331J50
C	3608(A,107,14)		CCSRCH331J50
C	3621(A,105,9)		CEVW100M25
C	3622(A,97,8)		CEVW100M16
C	3623(A,99,11)		CKSRYB104K25
C	3624(A,96,11)		CKSRYB104K16
C	3901(A,13,35)		CCSRCH681J50
C	3902(A,9,35)		CCSRCH681J50
C	3903(A,13,36)		CCSRCH681J50
C	3904(A,9,36)		CCSRCH681J50
C	3905(A,16,33)		CCSRCH181J50
C	3906(A,6,33)		CCSRCH181J50
C	3907(A,13,33)		CCSRCH561J50
C	3908(A,9,33)		CCSRCH561J50
C	3921(A,8,18)		CEVW100M25
C	3922(A,14,18)		CEVW100M16
C	3923(A,9,24)		CKSRYB104K25
C	3924(A,15,24)		CKSRYB104K16

D DISPLAY ASSY

MISCELLANEOUS

	IC	5901(B,141,45)	FL DRIVER IC PT6315
	IC	5902(A,179,44)	REMOTE RECEIVER UNIT RPM7540-H9
⚠	L	5901(A,168,46)	AXIAL INDUCTOR LAU220J
	L	5902(A,117,53)	AXIAL INDUCTOR LAU100J
	V	5901(A,168,58)	FL TUBE AAV7104
	S	5961(A,72,28)	SWITCH VSG1024
	S	5962(A,93,28)	SWITCH VSG1024
	S	5963(A,111,28)	SWITCH VSG1024
	S	5964(A,129,28)	SWITCH VSG1024
	S	5965(A,147,28)	SWITCH VSG1024
	S	5966(A,165,28)	SWITCH VSG1024
	S	5967(A,183,28)	SWITCH VSG1024
	CN	5901(A,110,65)	CONNECTOR CKS3378
		5971FL	SPACER AEB7367

RESISTORS

	R	5901(B,160,38)	RS1/16S221J
	R	5902(B,156,38)	RS1/16S221J
	R	5903(B,158,38)	RS1/16S221J
	R	5904(B,151,37)	RS1/16S823J
	R	5951(B,174,48)	RS1/16S470J
	R	5954(B,185,42)	RS1/16S101J
	R	5962(B,101,29)	RS1/16S102J
	R	5963(B,103,29)	RS1/16S122J
	R	5964(B,138,29)	RS1/16S152J
	R	5965(B,173,29)	RS1/16S182J
	R	5966(B,175,29)	RS1/16S102J

CAPACITORS

	C	5907(A,67,59)	ELECT. CAPACITOR CEJQ470M35

Mark	No.	Description	Part No.
	C 5911	(B,165,42)	CKSRYB223K50
	C 5912	(B,159,45)	CKSRYB223K50
	C 5913	(A,162,46)	CEAL470M6R3
	C 5915	(B,134,36)	CKSRYB103K50
	C 5916	(B,114,50)	CKSRYB223K50
	C 5917	(B,127,47)	CKSRYB223K50
	C 5918	(A,123,46) ELECTR. CAPACITOR	CEAL470M35
	C 5920	(B,160,34)	CCSRCH221J50
	C 5921	(B,156,34)	CCSRCH221J50
	C 5922	(B,158,34)	CCSRCH221J50
	C 5951	(B,184,48)	CKSRYB223K50
	C 5952	(A,173,52)	CEAL470M6R3

E USB ASSY

MISCELLANEOUS

	Q 5971	(B,48,53) DIGITAL TR(SC-70)	RT1P241M
	Q 5973	(B,44,45) TRANSISTOR	IMX9
	Q 5974	(B,45,36) TRANSISTOR	IMX9
	D 601	(B,28,27) ZENER DIODE	UMZU6.2N
	L 5971	(B,50,32) INDUCTOR	CTF1306
	L 5972	(B,41,32) INDUCTOR	CTF1306
	JA 602	(A,19,7) USB CONNECTOR	XKP3086
	JA 5901	(A,49,9) JACK	AKN7003
	CN5902	(A,41,60) CONNECTOR	CKS3376

RESISTORS

	R 5971	(B,49,45)	RS1/10S680J
	R 5972	(B,39,45)	RS1/10S680J
	R 5973	(B,52,45)	RS1/10S680J
	R 5974	(B,41,45)	RS1/10S680J
	R 5975	(B,54,44)	RS1/16S222J
	R 5976	(B,37,41)	RS1/16S222J
	R 5977	(B,54,40)	RS1/16S222J
	R 5978	(B,37,37)	RS1/16S222J
	R 5979	(B,49,40)	RS1/10S680J
	R 5980	(B,39,40)	RS1/10S680J
	R 5981	(B,52,40)	RS1/10S680J
	R 5982	(B,41,40)	RS1/10S680J
	R 5983	(B,52,36)	RS1/16S680J
	R 5984	(B,39,36)	RS1/16S680J
	R 5985	(B,50,36)	RS1/16S680J
	R 5986	(B,41,36)	RS1/16S680J
	R 5990	(B,39,32)	RS1/16S680J

CAPACITORS

	C 601	(B,31,50)	CKSRYB104K50
	C 602	(A,30,46)	CEAT221M6R3
	C 604	(B,29,23)	CKSRYB104K50
	C 605	(B,29,19)	CKSRYB104K50
	C 5971	(B,47,40)	CKSRYB102K50
	C 5972	(B,43,40)	CKSRYB102K50
	C 5973	(B,48,30)	CKSRYB473K25
	C 5974	(B,43,30)	CKSRYB473K25
	C 5977	(B,54,24)	CKSRYB103K50

F EUROSCART ASSY

MISCELLANEOUS

	IC 471	(B,38,116) VIDEO SW IC	MM1505XN
	IC 472	(B,29,118) VIDEO SW IC	MM1507XN
	Q 461	(B,68,138) CHIP TRANSISTOR	RT3WLMM
	Q 462	(B,47,135) CHIP TRANSISTOR	RT3WLMM
	Q 463	(B,52,140) DIGITAL TR(SC-70)	RT1P441M
	Q 472	(B,25,137) TRANSISTOR	RT1N241M
	Q 492	(B,80,110) DIGITAL TR(SC-70)	RT1P241M
	Q 493	(B,74,115) TRANSISTOR	IMX9
	D 471	(B,49,111) DIODE	MC2846-11
	D 472	(B,43,111) DIODE	MC2848-11
	D 473	(B,32,111) DIODE	MC2846-11
	D 474	(B,38,111) DIODE	MC2848-11
	JA 451	(A,62,78) CONNECTOR	XKB3054
	CN461	(A,89,101) CONNECTOR	CKS3388

RESISTORS

	R 461	(B,62,139)	RS1/16S223J
	R 462	(B,62,137)	RS1/16S122J
	R 463	(B,73,135)	RS1/16S472J
	R 464	(B,52,135)	RS1/16S472J
	R 465	(B,73,137)	RS1/16S563J
	R 466	(B,30,136)	RS1/16S103J
	R 467	(B,41,139)	RS1/16S122J
	R 468	(B,41,141)	RS1/16S122J
	R 469	(B,41,137)	RS1/16S102J
	R 470	(B,46,142)	RS1/16S821J
	R 471	(B,46,140)	RS1/16S561J
	R 472	(B,30,134)	RS1/16S223J
	R 473	(B,52,143)	RS1/16S563J
	R 474	(B,58,98) CHIP RESISTOR	RS1/16S75R0F
	R 475	(B,53,98) CHIP RESISTOR	RS1/16S75R0F
	R 476	(B,47,98) CHIP RESISTOR	RS1/16S75R0F
	R 477	(B,27,97) CHIP RESISTOR	RS1/16S75R0F
	R 478	(B,40,98) CHIP RESISTOR	RS1/16S75R0F
	R 481	(B,71,107)	RS1/16S102J
	R 482	(B,71,105)	RS1/16S102J
	R 483	(B,59,108)	RS1/16S473J
	R 484	(B,63,108)	RS1/16S473J
	R 485	(B,59,106)	RS1/16S471J
	R 486	(B,63,106)	RS1/16S471J
	R 493	(B,76,112)	RS1/16S472J
	R 494	(B,76,110)	RS1/16S472J
	R 495	(B,89,93)	RS1/16S331J
	R 496	(B,85,93)	RS1/16S331J

CAPACITORS

	C 464	(B,66,135)	CKSRYB104K50
	C 470	(B,41,143)	CKSRYB104K50
	C 471	(A,35,127)	CEAT100M50
	C 472	(B,39,122)	CKSRYB104K50
	C 473	(B,24,127)	CKSRYB104K50
	C 474	(B,24,131)	CKSRYB104K50
	C 475	(B,43,114)	CKSRYB104K50
	C 476	(B,29,115)	CKSRYB104K50
	C 477	(A,52,107) ELECT. CAPACITOR	CEAT471M6R3
	C 478	(A,45,107) ELECT. CAPACITOR	CEAT471M6R3
	C 479	(A,38,107) ELECT. CAPACITOR	CEAT471M6R3
	C 480	(A,30,107) ELECT. CAPACITOR	CEAT102M6R3
	C 481	(A,65,119)	CEAT100M50
	C 482	(A,65,112)	CEAT100M50
	C 483	(B,59,104)	CCSRCH331J50
	C 484	(B,63,104)	CCSRCH331J50
	C 485	(B,89,91)	CCSRCH101J50
	C 486	(B,85,91)	CCSRCH101J50

Mark	No.	Description	Part No.
C	487	(B,58,96)	CCSRCH470J50
C	488	(B,23,95)	CKSRYB104K50
C	489	(B,53,96)	CCSRCH470J50
C	490	(B,47,96)	CCSRCH470J50
C	491	(B,27,95)	CCSRCH470J50
C	492	(B,40,96)	CCSRCH470J50

G POWER SUPPLY UNIT

This assembly has no service parts.

H FM/AM TUNER UNIT

This assembly has no service parts.

6. ADJUSTMENT

6.1 ADJUSTMENT ITEMS AND LOCATION

■ Adjustment Items

[Mechanism Part]

❶ Tangential and Radial Height Coarse Adjustment

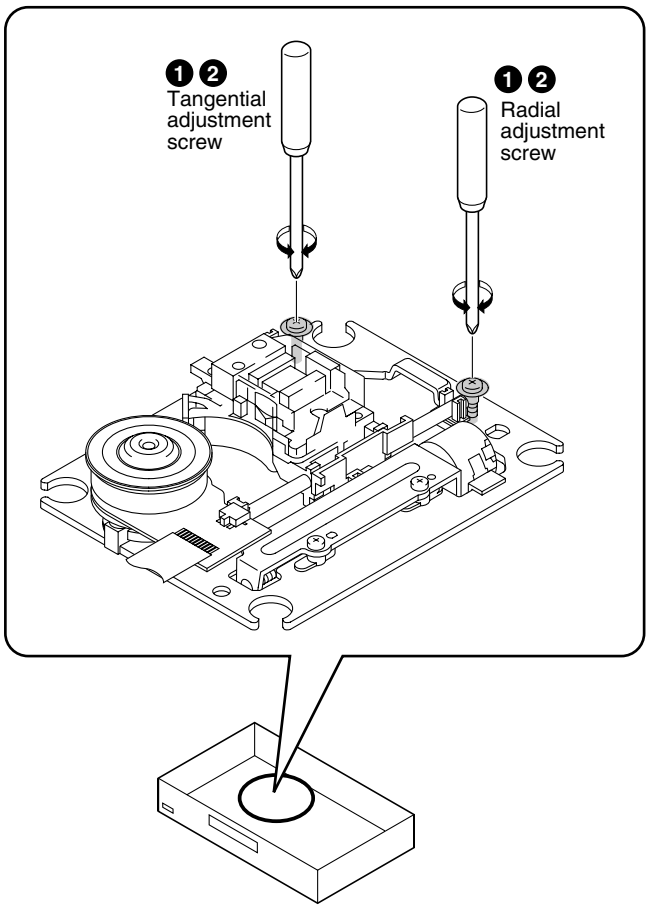
❷ DVD Error Rate Adjustment

[Electrical Part]

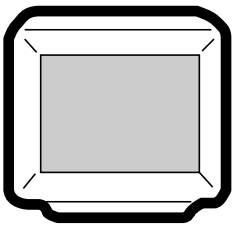
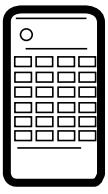
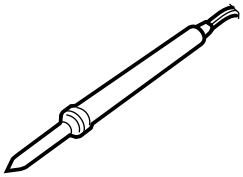
Electrical adjustments are not required.

■ Adjustment Points (Mechanism Part)

Cautions: After adjustment, adjustment screw locks with the Screw tight.



6.2 JIGS AND MEASURING INSTRUMENTS

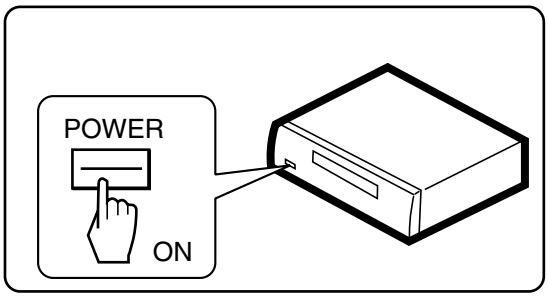
⊕ Screwdriver (large)	⊕ Screwdriver (medium)	 TV monitor	 Test mode remote control unit (GGF1381)
⊕ Precise screwdriver	DVD test disc (GGV1025)	 Soldering iron	Screw tight (GYL1001)

6.3 NECESSARY ADJUSTMENT POINTS

When	Adjustment Points	
■ Exchange Parts of Mechanism		
Exchange the 06SD Pickup Assy	Mechanical point	❶, ❷ ＊ After adjustment, screw locks with the Screw tight.
	Electric point	———
Exchange the Traverse Mechanism Assy-S	Mechanical point	———
	Electric point	———
Exchange the Spindle Motor	Mechanical point	❷ ＊ After adjustment, screw locks with the Screw tight.
	Electric point	———
■ Exchange PCB Assy		
Exchange PC Board LOAB and DVDM ASSYS	Mechanical point	———
	Electric point	———

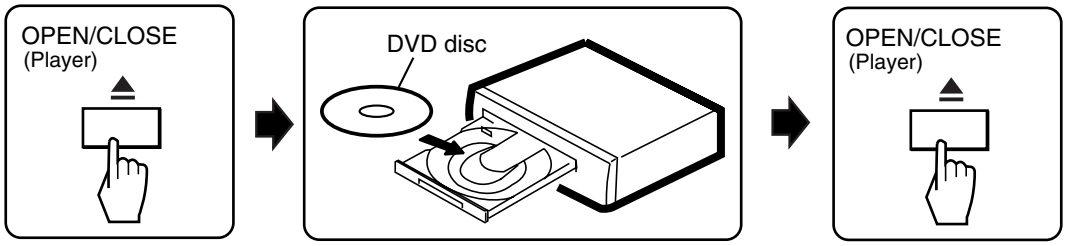
6.4 TEST MODE

POWER ON



DISC SET

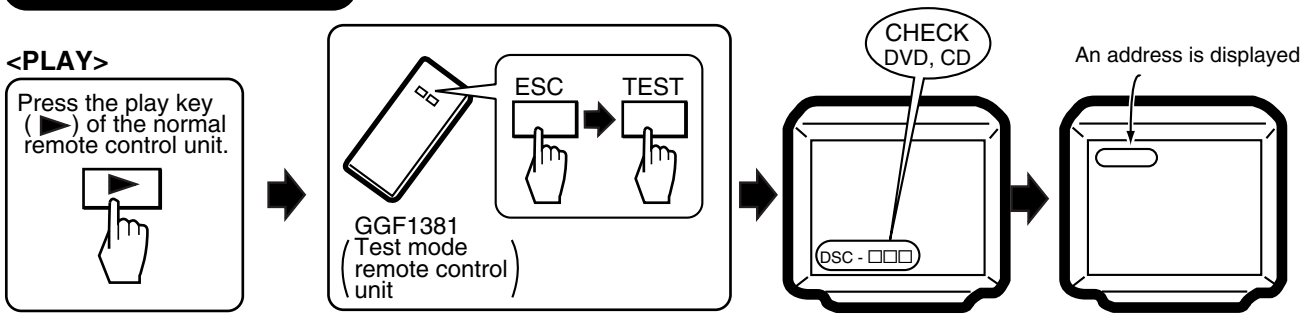
<TRAY OPEN>



<TRAY CLOSE>

TEST MODE: PLAY

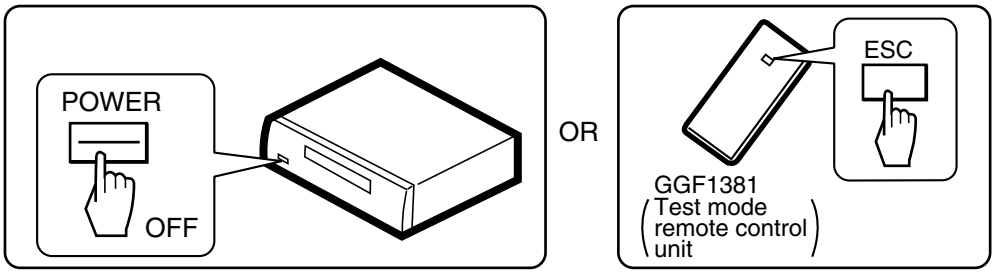
<PLAY>



Notes:

- After going into test mode, if you play back the disc, "DISC-NON" is displayed.
- The video signal and the audio signal are outputted during the test mode.
- The SKIP key and the SCAN key are effective during the test mode.

TEST MODE: OFF



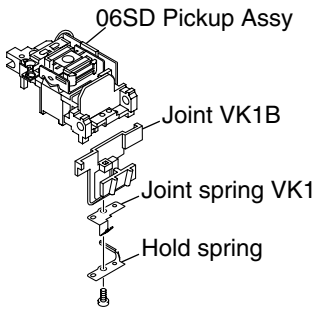
6.5 MECHANISM ADJUSTMENT

1 Tangential and Radial Height Coarse Adjustment

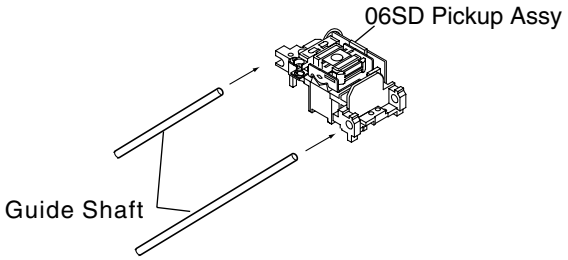
START

- Remove the 06SD Pickup Assy from the Traverse Mechanism Assy-S.
- Remove the joint and the joint spring of the 06SD Pickup Assy.

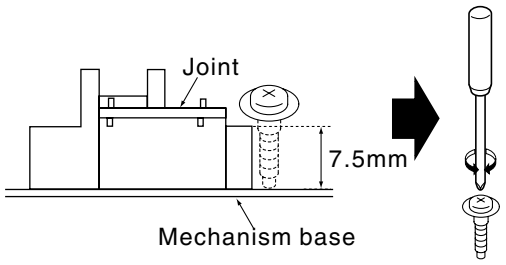
Note:
Before removing the flexible cable for the pickup, soldering of the pickup circuit is necessary.
For details, see "7.1.13 DISASSEMBLY".



- Pass through the guide shaft to a new 06SD Pickup Assy.
- Attach it to the Traverse Mechanism Assy-S.



- Put the joint between the Tangential (or Radial) adjustment screw and the mechanism base and turn each screw to adjust the height.
(Refer to "6.1 ADJUSTMENT ITEMS AND LOCATION".)



- Attach the Traverse Mechanism Assy-S to the 06 LOADER Assy.
- Turn it over and attach the joint and the joint spring.
- Arrange the flexible cables.
(Refer to "7.1.13 DISASSEMBLY".)

2 DVD Error Rate Adjustment

Notes:
- Use disc: GGV1025

START

- Play the DVD test disc at inner track
- Display ERROR RATE on the monitor

ESC CHP/TIM

Traverse Mechanism Assy-S
Adjust the radial adjustment screw so that ERROR RATE becomes around "5E-4". A

ERROR RATE : "5E-4"

Traverse Mechanism Assy-S
Fasten the radial adjustment screw so that ERROR RATE becomes around "1E-3". B

ERROR RATE : "1E-3"

- Unfasten the radial adjustment screw by 90 degrees step till ERROR RATE becomes around "1E-3" again . C
- Record the number of rotation (N1). (memorizing how much the screw was rotated.)
- Fasten the radial adjustment screw till the number of rotation becomes harf of N1. Best Radial point

ESC
Service mode end

- Play the DVD test disc at outer track (around #200000)

Service mode
ESC CHP/TIM

Traverse Mechanism Assy-S
Fasten the tangential adjustment screw so that ERROR RATE becomes around "1E-3". B

ERROR RATE : "1E-3"

- Unfasten the tangential screw by 90 degrees step till ERROR RATE becomes around "1E-3" again . C
- Record the number of rotation (N1).
- Fasten the tangential adjustment screw till the number of rotation becomes harf of N1. Best tangential point

ESC
Service mode end

Disc playback normally.
- The measurement of block error rate

ESC CHP/TIM

CHECK

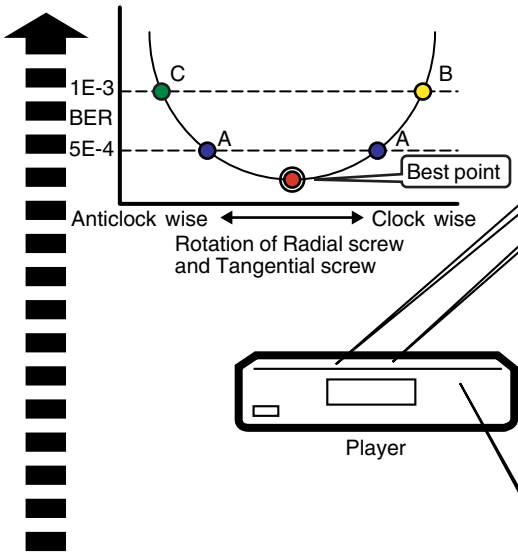
In this check, the error rate that is less than "5E-5"is better.

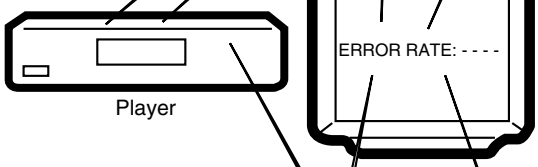
NG

OK

If error rate is OK, locks a root of tangential and radial adjustment screws with the Screw tight.
Screw tight: GYL1001

Turn the POWER OFF in case of NG once, and perform the adjustment once again.





7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 TEST MODE

■ Test Mode Functional Specification

① Test mode entry

In the power ON state, press the [ESC] (A8-5F) key and [TEST] (A8-5E) key in order of the Test mode remote control unit.

• OSD displays test mode.

② LD ON

Enter the test mode.

DVD : Press the [TEST] (A8-5E) and [1] (A8-01) keys in order, and turn on the laser diode (650n).

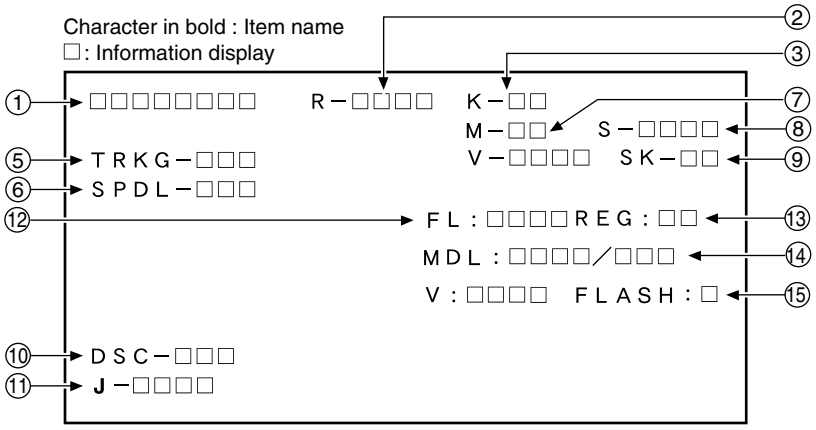
CD : Press the [TEST] (A8-5E) and [4] (A8-04) keys in order, and turn on the laser diode (780n).

③ Release the Test mode

• Turn off the power.

• Press the [ESC] (A8-5F) key of the remote control unit and reset it.

7.1.2 DISPLAY SPECIFICATION OF THE TEST MODE



① **Address indication**
The address being traced is displayed in number.
(as for the DVD, indication of decimal number is possible.)
DVD : ID indication (hexadecimal number, 8 digits)
[＊＊＊＊＊＊＊＊]
CD : ID indication [＊＊＊＊＊＊＊＊]

② **Code indication of remote control unit [R – ＊＊＊＊]**
In case of double code, display a 2nd code.

③ **Main unit keycode indication [K – ＊＊]**

⑤ **Tracking status [TRKG – ＊＊＊]**
Tracking on : [ON]
Tracking off : [OFF]

⑥ **Spindle status [SPDL – ＊＊＊]**
CLV : [CLV]
Off : [OFF]

⑦ **Mechanism (loading) position value [M – ＊＊]**
Unknown : [01] or [41]
Open state : [04]
Close state : [08]
During opening : [12]
During closing : [22]

⑧ **Slider position [S – ＊＊＊＊]**
In Side Switch ON : [01]
In Side Switch OFF : [00]

⑨ **Output video system [V – ＊＊＊＊]**
NTSC system : [NTSC]
PAL system : [PAL]
Automatic setting : [AUTO]

Scart terminal output [SK – ＊＊]
(Display only the WY model which can do the output setting of scart terminal.)
VIDEO : [00]
S-VIDEO : [01]
RGB : [02]

⑩ **Disc sensing [DSC – ＊＊＊]**
The type of discs loaded is displayed.
[DVD], [CD]

⑪ **Jitter value [J – ＊＊＊＊]**
Note: Don't use it.

⑫ **Version of the FL controller [FL: ＊＊＊＊]**
Note: Don't use it.

⑬ **Region setting of the player [REG: ＊]**
Setting value : [1] to [6]

⑭ **Destination setting of the FL controller [MDL: ＊＊＊＊ / ＊＊＊]**
Four characters in the front represent code 01.
Three characters in the back represent the destination code.
J: /J, K: /KU, /KC, /KU/KC, R: /RL/RD, RAM : /RAM,
LB: /LB, WY: /WY

⑮ **Version of the flash ROM [V: ＊＊.＊＊]**
Flash ROM size [FLASH = ＊＊]

7.1.3 FUNCTIONAL SPECIFICATION OF THE SHORTCUT KEY

Only during normal playback, the following shortcut keys can be assigned by pressing a required key after pressing the ESC key of the remote control unit. To quit, press the ESC key

Command Contents	Conditions	Remote Control Key Name	Remote Control Code
Memory clear and region / revision indication		CLEAR (∗1)	A8-45
Average value measurement of DVD error rate		5 (∗1)	A8-05
CD error rate measurement		5 (∗1)	A8-05
Scart terminal output : VIDEO	WY, models equipped with Scart terminal	AUDIO	A3-BE
Scart terminal output : S-VIDEO		SUBTITLE	A3-36
Scart terminal output : RGB		ANGLE	A3-B5
Progressive OFF	Only for progressive models	R_SKIP	A3-9D
Progressive ON		F_SKIP	A3-9C
HDMI Resolution : 1920 x 1080i	Only for HDMI models	PROGRAM	A3-EC
FL indication of ID number		STEREO (∗1)	A8-4A
ZOOM ON (×4)		ZOOM	A3-37
Service mode indication (error rate indication, etc.)		CHP/TIM (∗1)	A8-13
Model information indication		CHAP (∗1)	A8-40
Title search Input mode IN Title No. input Search execution		SIDE A (∗1) Numbers (∗1) PLAY (∗1)	A8-4D A8-00 to A8-09 A8-17
Region confimation mode		A.MON (∗1) Numbers (∗1)	A8-1E A8-01 to A8-08

∗1 : Test mode remote control unit

• Service mode indication (ESC + CHP/TIM keys)
ID Address
The error rate is always displayed in exponential notation, e.g., ∗.∗ ∗ e - ∗, for both DVDs and CDs.
EDC/ID/AV 1 error history (ID Address, EDC/ID Error, last eight errors)

• Calculation of the average error rate (ESC + "5" [Test mode remote control unit] keys)
The average of the last eight error rates is calculated and indicated in exponential notation. After the calculation is completed, "OK" or "NG" is displayed. If "NG" is displayed, the disc tray will open (for both DVDs and CDs)
For DVDs: OK with 5.0e-4 or less, for CDs: OK with 7.6e-3 or less

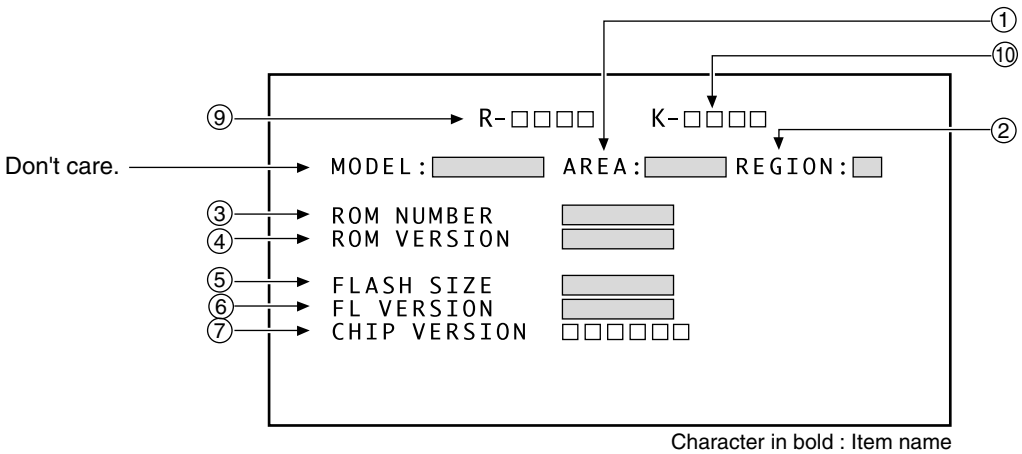
• Indication of model information (ESC + CHAP keys)
The items from 12 to 15 of the TEST MODE Indications are displayed. However, in the indications, S in the standard test mode is changed to CHIP VERSION, and M is changed to RF VERSION. For details, see 7.1.4.

• Region confirmation mode (ESC + A.MON [Test mode remote control unit] + "1"-"8" [Test mode remote control unit] keys)
After you press the AUDIO key while holding the ESC key pressed and then input the region number, if the number is different from that set in the unit, an error message is displayed, and the tray opens.

7.1.4 SPECIFICATION OF MODEL INFORMATION DISPLAY

To display model information : Press the ESC key then the CHAP key.
To close the model information display : Press the ESC key.

• Display contents



Character in bold : Item name
□: Information display

① **Destination indication**
Display it according to model information set from the FL controller.
② **Region No.**
③ **Part number**
④ **ROM version**
⑤ **Flash size**

⑥ **FL controller version**
⑦ **CHIP VERSION**

⑨ **Remote control code**
⑩ **Key code of Main unit**

7.1.5 FUNCTIONAL SPECIFICATION OF THE SERVICE MODE

• Display during Service Mode

To enter Service Mode, press the CHP/TIM key while holding the ESC key pressed.
To quit, press the ESC key.

Service mode display

① ID Address
② Error rate (always displayed), in exponential notation

ERROR RATE : * * * * * * * *
(* * * *)
└── Number of error

• Calculation of the average error rate
For DVDs: OK with 5.0e-4 or less, for CDs: OK with 7.6e-3 or less

ex) For DVDs

• Step 1		• Step 2	
△△e -□		△△e -4	
△△e -6	: OK	3.0e -4	: OK
△△e -5	: OK	4.0e -4	: OK
△△e -4	: Refer to Step 2	5.0e -4	: OK
△△e -3	: NG	6.0e -4	: NG
△△e -2	: NG	7.0e -4	: NG

③ EDC/ID error history (ID Address, EDC/ID errors, last eight errors)

Note:
* Error of AV1 is not supported in this player.

Indication plan contents

Character in bold : Item name
□: Information display

7.1.6 SERVICE TEST MODE

1. Conditions During Service Test Mode

- During Service Test mode, the unit will not be shut down for an emergency even if one of the failures mentioned below occurs.
- After the unit has been shut down in Normal mode for an emergency upon detection of one of the failures mentioned below, you can turn it on immediately, without waiting for one minute, in Service Test mode.
- The accumulated power-on time can be checked during Service Test mode.

2. How to enter Service Test mode

- Connect AC power cord with the STEST port (microcomputer terminal IC5501: 43-pin) at High (5 V). (See "Service Test mode connecting point".)
  Note: Initial function setting is DVD/CD.
- Connect AC power cord while holding both the VOL– and POWER keys on the main unit pressed. The unit will be turned on, and the following indication will be displayed:

3. How to quit Service Test mode, and conditions for quitting

- To quit Service Test mode, turn the power off or disconnect the AC power cord to turn the power off.
- When Service Test mode is quit, only data on protection in RAM will be initialized, and data on user settings in RAM will not be initialized.

4. Indications on the FL display when Service Test mode is entered

- Indications on the FL display when Service Test mode is entered differ depending on whether the unit was turned off normally or shut down for emergency protection, immediately before Service Test mode starts, as follows:

[After a normal power-off]

FL display `Welcome` ⇩ FL display `VOL 0` ⇩ FL display `DVD SERV`

[After a shutdown caused by an AMP-system failure]

FL display `PRTCT E` ⇩ FL display `VOL 0` ⇩ FL display `DVD SERV`

[After a shutdown caused by a DVD-system failure]

FL display `DVDPRTCT` ⇩ FL display `VOL 0` ⇩ FL display `DVD SERV`

[After a shutdown caused by an EEPROM (IC5502) failure]

FL display `EEP ERR` ⇩ FL display `VOL 0` ⇩ FL display `DVD SERV`

[After a shutdown caused by high-temperature detection]

FL display `OVERTEMP` ⇩ FL display `VOL 0` ⇩ FL display `DVD SERV`

[After a shutdown 1 caused by over current detection]

FL display `OC ERR 1` ⇩ FL display `VOL 0` ⇩ FL display `DVD SERV`

[After a shutdown 2 caused by over current detection]

FL display `OC ERR 2` ⇩ FL display `VOL 0` ⇩ FL display `DVD SERV`

5. Operations during Service Test Mode

- Basically, operations in Service Test mode are the same as in Normal mode. However, to indicate that the unit is in Service Test mode, the following are displayed when the functions are changed:

[Functions]	[FL display]
DVD/CD	DVD SERV
USB	USB SERV
TUNER	TX SERV
LINE1	LN1 SERV
LINE2	LN2 SERV

- When the function is set to LINE2, the Surround setting is fixed to 5-channel STEREO, which is only for Service Test mode. (In Normal mode, it is fixed to 2-channel STEREO.) In such a case, do not check the sound through the headphones, because headphone operation with 5-channel STEREO is not guaranteed. If you wish to check the sound through the headphones, use a function other than LINE2.

6. Failures

• Depending on the types of errors, one of the following error messages will be displayed when the unit is turned on:

PRTCT E

A protection circuit was activated:

1. The V+10, V+5 or V+3R3 was short-circuited (See the protection circuit on "3.4 DVD MAIN ASSY (2/5)"), or the value at V+10, V+5, or V+3R3 exceeded the standard value because of an abnormality in its power section.
2. The XPROTECT line up to the system-control computer (PDC133A or PDC134A) was short-circuited by grounding or was broken.

DVDPRTCT

Abnormality in the DVD section

1. The V+6R8, V+5V, or V+3 was short-circuited, or the value at V+6R8, V+5V, or V+3 exceeded the standard value because of an abnormality in its power section.
2. The VDET line up to the system-control computer (PDC133A or PDC134A) was short-circuited by grounding or was broken. (See VDET circuit on "3.4 DVD MAIN ASSY (2/5)")

EEP ERR

1. Breakage or short-circuiting of the communication line between the μ-COM (IC5501) and the EEPROM (IC5502) can be suspected.
2. A failure in the EEPROM (IC5502) can be suspected.

OC ERR 1
OC ERR 2

- If "OC ERR 1, 2" is not displayed when the unit is turned on in Normal mode, short-circuiting of the speaker terminals can be suspected. (It causes speaker cable "+", "-" short.)
- If "OC ERR 1, 2" is displayed again when the unit is turned on in Normal mode, the following causes can be suspected:
  1. One or more of the ICs among the three digital amplifier ICs (IC3201, IC3301, and IC3401: TAS5122DCA) on the DAMP Assy is in failure.
  2. The line between one of the above digital amplifier ICs and the speaker terminals is short-circuited.
  3. The XSD line from one of the above digital amplifier ICs to the system-control computer (PDC133A, PDC134A) is short-circuited by grounding or is broken.

OVERTEMP

- If "OVERTEMP" is not displayed when the unit is turned on in Normal mode, the unit is normal. The protection circuit was activated because the temperature at the three digital amplifier ICs (IC3201, IC3301, and IC3401: TAS5122DCA) had become too high. Because it is likely that this was a temporary temperature rise, lower the volume of the speakers.
- If "OVERTEMP" is displayed again when the unit is turned on in Normal mode, the following causes can be suspected:
  1. One or more of the ICs among the three digital amplifier ICs (IC3201, IC3301, and IC3401: TAS5122DCA) on the DAMP Assy is in failure.
  2. The OTW line from one of the above digital amplifier ICs to the system-control computer (PDC133A, PDC134A) is short-circuited by grounding or is broken.

7. Accumulated power-on time display

• Hold the STOP key on the unit pressed for 8 seconds during Service Test mode. After the version for the system-control computer is displayed, the accumulated power-on time is displayed.

Version of the system-controller **PDC133A**

⇩ About 3 seconds after

Accumulated power-on time **10H30M**

- Power-on time is always counted while the power is on, regardless of unit's functions and operations. However, it is not counted during Standby mode.
- The maximum countable power-on time is 255H59M (255 hours 59 minutes.) The indication will not advance beyond that.
- The accumulated power-on time basically cannot be cleared.

8. DSP error message mode

[How to enter DSP error message mode]

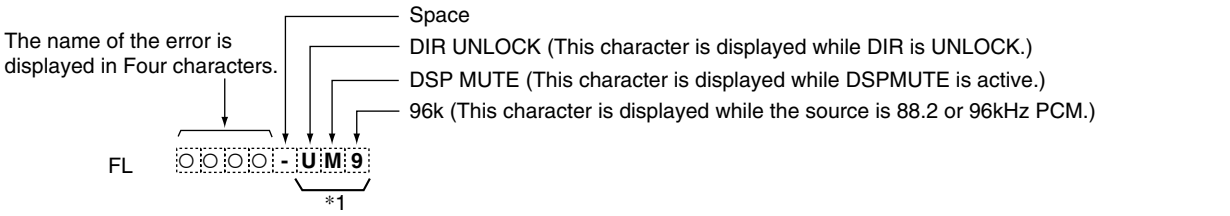
- Press "SOUND" button of the accessory remote control in service test mode, to select the mode that DSP error message are displayed.

[How to quit DSP error message mode]

- Press "SOUND" button of the accessory remote control again to select normal service test mode.

For this reason, the usual function of "SOUND" is not effective during Service Test mode.

■ Specification of DSP error display

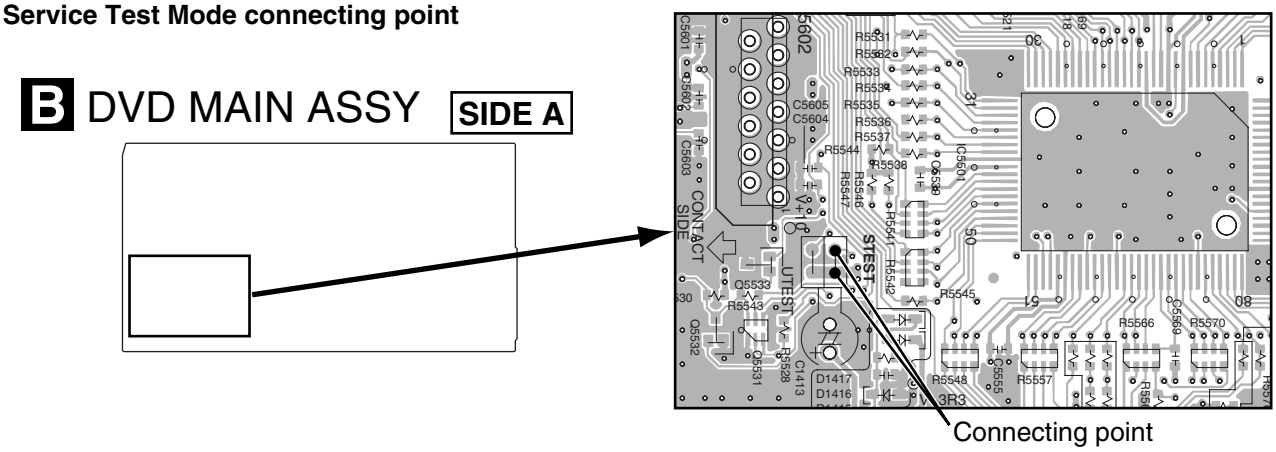

The name of the error is displayed in Four characters.
Space
DIR UNLOCK (This character is displayed while DIR is UNLOCK.)
DSP MUTE (This character is displayed while DSPMUTE is active.)
96k (This character is displayed while the source is 88.2 or 96kHz PCM.)
FL
- U M 9
*1

*1 : The "U", "M" and "9" are not displayed synchronizing with the display "ERR_0" - "ERR_4" ("DIRERR",etc), but it depends on the state each time.
The following example display of "ERR_0" - "ERR_4" is just a sample.

■ Example of DSP error display

[Error]	[8-char FL display] (1 2 3 4 5 6 7 8)	
ERR. 0	D I E R - U M	Cannot receive data from DIR → Suppose the fault of DIR
ERR. 1	D S E R - U M	Cannot receive data from DSP → Communication fault between DIR and DSP→ Suppose the fault of DSP
ERR. 2	H R E Q - U M	There is no return value of HREQ → Suppose the fault of DSP
ERR. 3	D S N G - U M	ERR information from DSP → Communication fault between DIR and DSP→ Suppose the fault of DSP
ERR. 4	D M U T - M	DECMUTE continues being mute → Communication fault between DIR and DSP→ Suppose the fault of DSP
NO ERR (Source is 88.2/96kHz.)	D S O K - 9	During 96kHz PCM source playback
NO ERR (Source is not 88.2/96kHz.)	D S O K -	There is no abnormality.

■ Service Test Mode connecting point



7.1.7 METHOD FOR DIAGNOSING DEGRADATION OF THE LDS ON THE PICKUP ASSY

Case when this diagnosis is required :
When playback of any disc, including a test disc (DVD: GGV1025, CD: STD-905), won't play or doesn't play

How to diagnose

In the case mentioned above, degradation of the laser diodes (LDs) mounted on the 06SD Pickup Assy is suspected. Measure the voltage between the two ends of one of the resistors mentioned below.

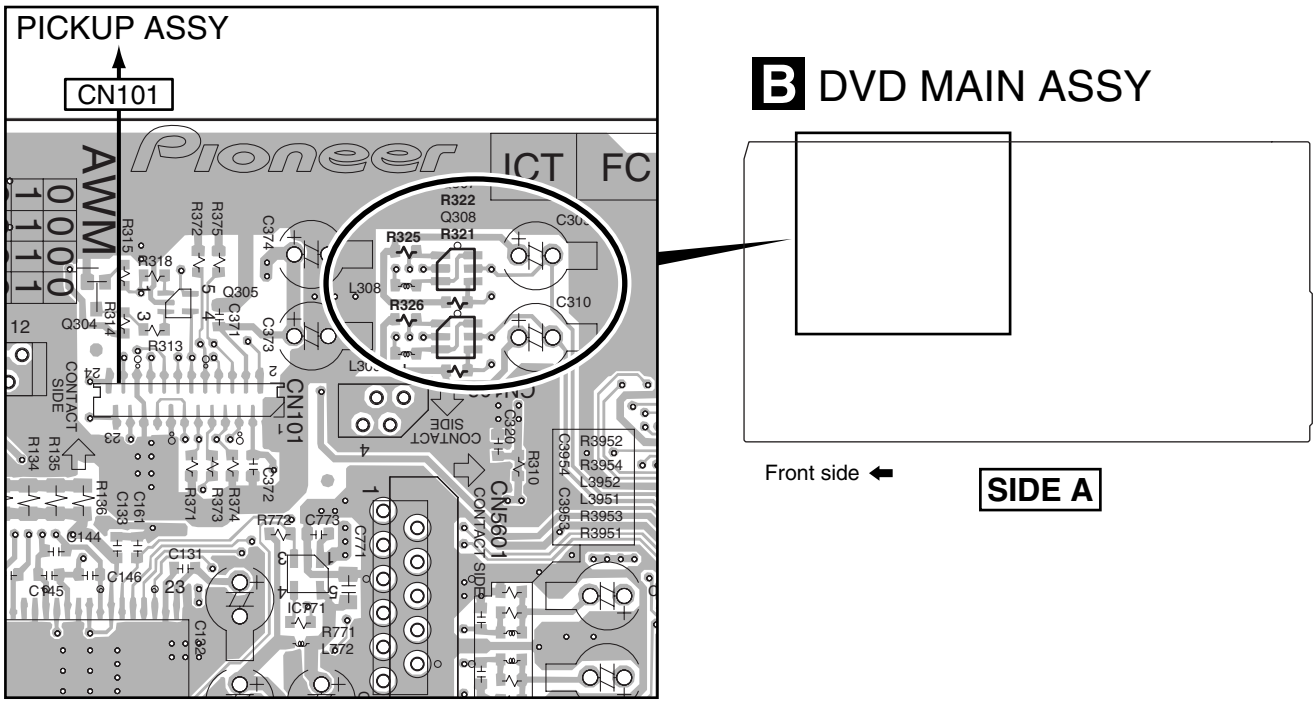
- **No playback of a DVD :**

  Measure the voltage between the both ends of R322 or R325 on the DVDM Assy. If the voltage is 0.4 V or higher, the 650-nm LD is degraded.

- **No playback of a CD :**

  Measure the voltage between the both ends of R321 or R326 on the DVDM Assy. If the voltage is 0.4 V or higher, the 780-nm LD is degraded.

If the measurements show degradation of an LD, replace the 06SD Pickup Assy.



7.1.8 DVD TROUBLE SHOOTING

No.	Symptoms	Diagnosis Contents	Possible Defective Points
1	The power is not turned on.	Are wires of output connector (POWER SUPPLY Unit) and CN1001 (DVDMAIN Assy) disconnected or damaged ?	Connector / cable
		Check that the following voltage is output : Q1202-source on the DVDMAIN Assy: 3.3V	**POWER SUPPLY Unit**
2	An opening screen is not displayed on the monitor (The FL display lights. The mechanism does not work.)	Are the signals output from IC201-pin 97 (MDATA) and pin 98 (SCLK) on the DVDMAIN Assy ? (in the range of 0-3V)	**DVDMAIN Assy** DVD IC (IC201)
		Are the signals input into IC5501-pin 50 (MDATA) and pin 51 (SCLK) on the DVDMAIN Assy ? (in the range of 0-3V)	**DVDMAIN Assy** UCOM (IC5501)
		Check that the following voltage are output : Q1302-collector on the DVDMAIN Assy: 5V	**DVDMAIN Assy** 5V Regulator IC (IC751)
		Is a resonator (X201: 27MHz) on the DVDMAIN Assy oscillating ?	**DVDMAIN Assy** Crystal resonator (X201) DVD IC (IC201)
		• Is a signal input into IC203-pin26 (PCE#) on the DVDMAIN Assy ? (Is a signal "H" for 80 mS and then "L" after the power is turned on ?) → Communication with flash ROM. • Are the signals input into IC202-pin 16 (DWE#), pin 19 (DCS#) and pin 38 (SDCLK) on the DVDMAIN Assy ? (Is a signal fluctuating ?) → Communication with SDRAM	**DVDMAIN Assy** DVD IC (IC201) Flash ROM (IC203) SDRAM (IC202)
		Is a signal output from IC203-pin 28 (PRD#) on the DVDMAIN Assy? (Is a signal fluctuating for several hundred mS after the power is turned on ?)	**DVDMAIN Assy** Flash ROM (IC203)
		Is a signal input into IC5501-pin 67 (DVD ACK) on the DVDMAIN Assy ? (Is a signal fluctuating ?) → Communication with FL Control IC	**DVDMAIN Assy** DVD IC (IC201) UCOM (IC5501)
		Is a signal output from IC5501-pin 78 (XREADY) on the DVD MAIN Assy ? (Is a signal fluctuating in the range of 0-5V ?)	**DVDMAIN Assy** UCOM (IC5501)
		Are the signals output from IC5501-pin 49 (SDATA) on the DVD MAIN Assy ? (in the range of 0-5V)	**DVDMAIN Assy** DVD IC (IC201) UCOM (IC5501)
		Are the signals of IC204-pin 5 (SDA) and pin 6 (SCL) on the DVD MAIN Assy fluctuating for one or two seconds after the power is turned?	**DVDMAIN Assy** EEPROM (IC204)
3	An opening screen is not displayed on the monitor (The FL display lights. The mechanism works.)	Check the video signal path between DVD IC (DVDMAIN Assy IC201) and video-out terminal (see the block diagram)	**DVDMAIN Assy** Video circuit after DVD IC (IC201)

No.	Symptoms	Diagnosis Contents	Possible Defective Points
4	A tray cannot be opened. (An opening screen is displayed on the monitor)	Does the voltage of CN104-pin 3 and pin 5 on the DVDMAIN Assy change normally ? Pin 3 (SW2(TRIN)): Tray is fully closed: "L" Pin 5 (SW1(TROUT)): Tray is fully opened: "L"	**LOAB Assy** Tray SW (S101)
		Is the signal input into IC101-pin 11 (TROPEN) on the DVDMAIN Assy? At open: 3.3V, At close: 0V	**DVDMAIN Assy** DVD IC (IC201)
		Are the signals output from IC101-pin 1 and pin 2 (CN103-pin 1 and pin 2) on the DVDMAIN Assy ? Pin 2: Approx. 6V during opening tray approx. 0V during closing tray. Pin 1: Approx. 0V during opening tray approx. 6V during closing tray.	**DVDMAIN Assy** FTS Driver IC (IC101)
		Are wires of CN104 and CN103 on the DVDMAIN Assy disconnected or damaged ?	Connector / cable
		Does the voltage of CN102-pin 1 on the DVDMAIN Assy change to 0V by pressing the Inside switch.	Inside switch
5	Playback impossible (no focusing)	Are the signals output from IC101-pin 3 (FOCS_DRV) and pin 4 (FOCS_RTN) on the DVDMAIN Assy ?	**DVDMAIN Assy** FTS Driver IC (IC101)
		Does 650-nm LD emit light ? Does a pickup lens move up / down ? Does an actuator spring bend ?	Pickup
		Are plastic parts damaged ? Or is a shaft detached ? Is the turntable detached or tilted ?	Mechanism section (motor)
		Is flexible cable of CN101 on the DVDMAIN Assy disconnected or damaged ?	Flexible cable / connector
		Is signal output from IC201-pin 42 (FOSO) on the DVDMAIN Assy ? (Device control of about 1.4 V is output usually. It is fluctuated by about ± 250 mV with focus up / down.)	**DVDMAIN Assy** DVD IC (IC201)
6	Playback impossible (Spindle does not turn)	Are the signals output from IC101-pin 30 (W), pin 33 (V) and pin 35 (U) on the DVDMAIN Assy ? Is pin 26 (STBY) fixed LOW ? (pin 26 is High at playback: 3V)	**DVDMAIN Assy** FTS Driver IC (IC101)
		Is there any part detached from the spindle motor ? Or Is there any foreign object lodged in it ?	Mechanism section (Spindle motor)
		Are wires of CN102 on the DVDMAIN Assy disconnected or damaged ?	Flexible cable / connector
		Is signal output from IC201-pin 37 (DMSO) on the DVDMAIN Assy ?	**DVDMAIN Assy** DVD IC (IC201)
7	Playback impossible (Playback stops)	Does 650-nm LD deteriorate ? If the voltage at each both ends of R322 and R325 on the DVD MAIN Assy is 0.4 V or more, the 650-nm LD is definitely deteriorated.	650-nm LD deteriorated. (When playback of a DVD is impossible)
		Does 780-nm LD deteriorate ? If the voltage at each both ends of R321 and R326 on the DVD MAIN Assy is 0.4 V or more, the 780-nm LD is definitely deteriorated.	780-nm LD deteriorated. (When playback of a CD is impossible)
		Is there abnormality in FG waveform ? (IC201-pin 50)	**DVDMAIN Assy** FG output : FTS Driver IC (IC101)
		Are there scratches or dirt on the disc ?	Disc
8	Picture disturbance during playback (block noise, freeze, other)	Are there scratches or dirt on the disc ? Is there a problem with the format of the disc ?	Disc
		Check the video signals. Composite video signal (IC401-pin 25) S video signal (IC401-pin 21, pin 26) RGB video signal (IC401-pin 16, pin 18, pin 20)	**DVDMAIN Assy** DVD IC (IC201) Video IC (IC401, IC451)
9	No sound (Picture is normal)	Check the waveform (ALCK : IC201-pin 212), (ALRCK : IC201-pin 209), (ABCK : IC201-pin 210), (ASDATA0 : IC201-pin 197).	**DVDMAIN Assy** DVD IC (IC201)

● Symptoms that may occur when any of the following ICs is in failure

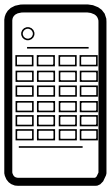
IC	Symptoms
EEP ROM (DVDMAIN Assy : IC204)	User's data cannot be stored in memory. The ID number is lost.
Flash ROM (DVDMAIN Assy : IC203)	The power cannot be turned on. Downloading of the firmware cannot be performed.
DVD IC (DVDMAIN Assy : IC201)	Any kind of symptoms (no power, a failure in any of the servo, video and audio systems, etc.) may be generated, because the DVD processing is performed by a single chip.
64M SDRAM (DVDMAIN Assy : IC202)	No power. Block noise is generated during playback.

7.1.9 ID NUMBER AND ID DATA SETTING

Caution:
For the DVD players compatible with DVD-RW, for playback of a DVD-RW disc (CPRM) and for the DVD players possessing HDMI output, for HDCP process, it is necessary that an individual ID number and ID data are set for each player. If the ID number and ID data be not properly set in the manner described below, future operations cannot be guaranteed. The ID number is written on the yellow label at the rear panel of the player.
If there is no yellow label, before downloading FLASH ROM, take note of the ID number set following the procedures outlined in "ID Number Confirmation Mode" on the next page.
Note: Enter ID numbers while the unit is in Stop mode so that the values set will be immediately written to the flash ROM.

Setting an ID number or ID data is required in the following case:
If "No NUM" or "NO DATA" is displayed on the FL display for a few seconds immediately after the power to the player is turned on or during Stop mode.

JIGS AND MEASURING INSTRUMENTS

 Service Remote Control Unit [GGF1381]	DVD Data Disc [GGV1269]

■ ID Number Input Mode

① To enter ID Number Input Mode, with no ID number set, such as in a case of immediately after upgrading the firmware, press the ESC key then the STEREO key.

Note: If a previous ID number and ID data, such as a factory-preset ID number and ID data, are maintained, the unit enters ID Number Confirmation Mode when the above keys are pressed. However, if only an ID number is maintained, the unit enters ID Data Input Mode.

② Enter a 9-digit ID number. The ID number is also displayed on the FL display.

③ By pressing the CLEAR key without having input a number, you can exit this mode. Each press of this key after a number has been input deletes one digit.

```
[Player's ID Number Setting]
 ID Number ?
 - - - - - - - - -
②
<CLEAR>  Exit
③
Input ID Number !
```

④ After entering all 9 digits, if you press the PLAY key, the unit enters Compare mode. Enter the same ID number again. Only if your two input numbers match, the ID number is set. Compare mode helps eliminate mistyping of the ID number.

Note: If you press the PLAY button before inputting a 9-digit ID number, the unit returns to Step ② without doing anything else.

⑤ After entering all 9 digits, if you press the SEARCH key, the unit unconditionally sets the input number as the ID number. Then the unit automatically enters Player's Data Input Mode. (The SEARCH key is not accepted after all 9 digits have been entered.)

```
[Player's ID Number Setting]
 ID Number ?
 0 0 0 0 0 0 0 0 1
④ <PLAY>      Compare Mode
⑤ <SEARCH>  Enter
 Input ID Number !
```

⑥ This display appears when the PLAY key is pressed in Step 4. Enter a 9-digit number to compare. The number is also displayed on the FL display.

⑦ By pressing the CLEAR key without having input a number, the unit returns to Step ② without doing anything else. Each press of this key after a number has been input deletes one digit.

```
[Player's ID Number Setting]
 ID Number ?
    0 0 0 0 0 0 0 0 1
 Compare
⑥   * * * * * * * * *
 Input ID Number !
```

⑧ After entering all 9 digits, if you press the PLAY key, the unit compares the numbers input in Steps ② and ⑥, and only if the numbers match, that number is set as the ID. Then the unit automatically enters ID DATA Input Mode. If the numbers do not match, the disc tray is opened, and the unit exits ID Number Input Mode.

Note: If you press the PLAY button before inputting a 9-digit ID number, the unit returns to Step ⑥ without doing anything else.

```
[Player's ID Number Setting]
 ID Number ?
    0 0 0 0 0 0 0 0 1
 Compare
    0 0 0 0 0 0 0 0 1
⑧ <PLAY>  Enter
 Input ID Number !
```

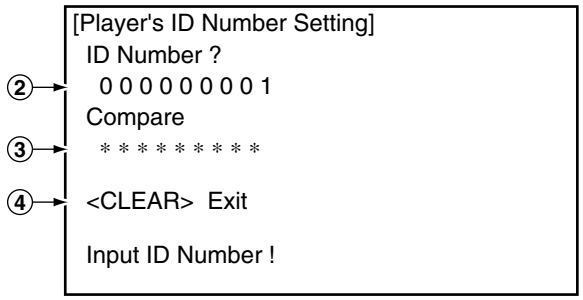
ID Number Confirmation Mode

① To enter ID Number Confirmation Mode after the ID number and the ID data are set, press the ESC key then the STEREO key.

② The ID number already set is displayed.
(It is also displayed on the FL display.)

③ Enter a 9-digit number for comparison. This is not required when you only wish to check the ID number visually.
(The number is also displayed on the FL display.)

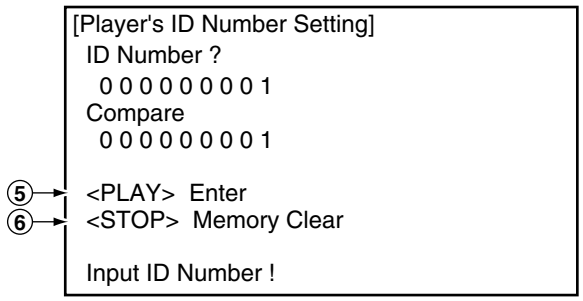
④ By pressing the CLEAR key without having input a number, you can exit this mode. Each press of this key after a number has been input deletes one digit.



⑤ After entering all 9 digits, if you press the PLAY key, the unit compares the number entered in Step ② with the ID number set, and only if the numbers match, the unit automatically exits ID Number Confirmation Mode. If an ID data has not been entered, the unit enters ID DATA Input Mode. If the numbers do not match, the disc tray is opened, and the unit exits ID Number Confirmation Mode.

Note: If you press the PLAY button before inputting a 9-digit ID number, the unit returns to Step ④ without doing anything else.

⑥ After entering all 9 digits, if you press the STOP key, the unit compares the number entered in Step ③ with the ID number set, and only if the numbers match, the unit automatically deletes the ID number and exits this mode. If the numbers do not match, the disc tray is opened, and the unit exits this mode. (The STOP key is not accepted after all 9 digits have been entered.)



• Indication of an ID number already set

An ID number already set is displayed in the following cases:

1) When the ESC key then the CLEAR key are pressed, user settings are cleared, then the ID number set is displayed on the screen. In this case, the ID number is not displayed on the FL display.
2) When the unit enters ID Number Confirmation Mode by your pressing the ESC key then the CLEAR key, the ID number set is displayed. In this case, the ID number is also displayed on the FL display.
   If you only need to confirm the ID number, you can exit this mode by pressing the CLEAR key or turning off the power.

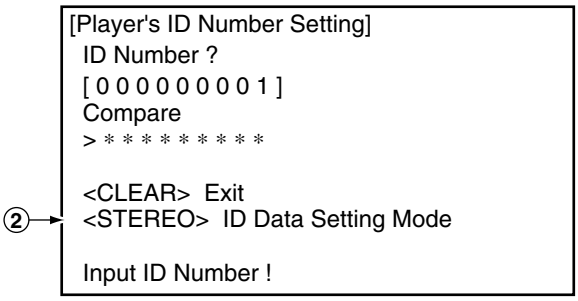
• Indication when no ID number is set

If no ID number is set, the message "No NUM" flashes on the screen and FL display for a few seconds after the power is turned on or during Stop mode.

ID DATA Input Mode

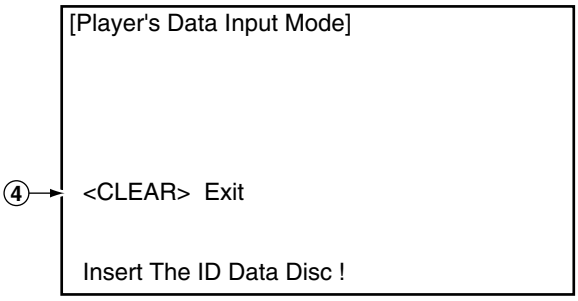
① To enter ID DATA Input Mode, with the ID number set, press the ESC key then the STEREO key.

② When the STEREO key is pressed, the unit enters ID DATA Input Mode.



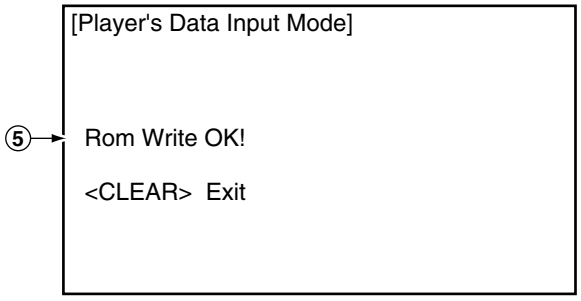
③ If the DVD DATA DISC is loaded in this mode, the unit automatically starts reading the data.
(If the DVD DATA DISC has already been loaded, the unit does not start reading the data. In this case, open then close the tray.)

④ To exit this mode, press the CLEAR key. While data are being read from the DVD DATA DISC, you cannot exit this mode.

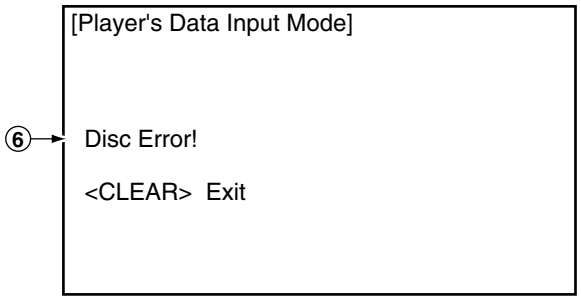


⑤ When writing of the data read from the disc to flash ROM is completed, "Rom Write OK!" is displayed. After seeing this message, you can exit this mode by pressing the CLEAR key.

Note: Whether or not the data have been written to flash ROM can be confirmed by watching for the message "Rom Write OK!" being displayed after the disc is read.

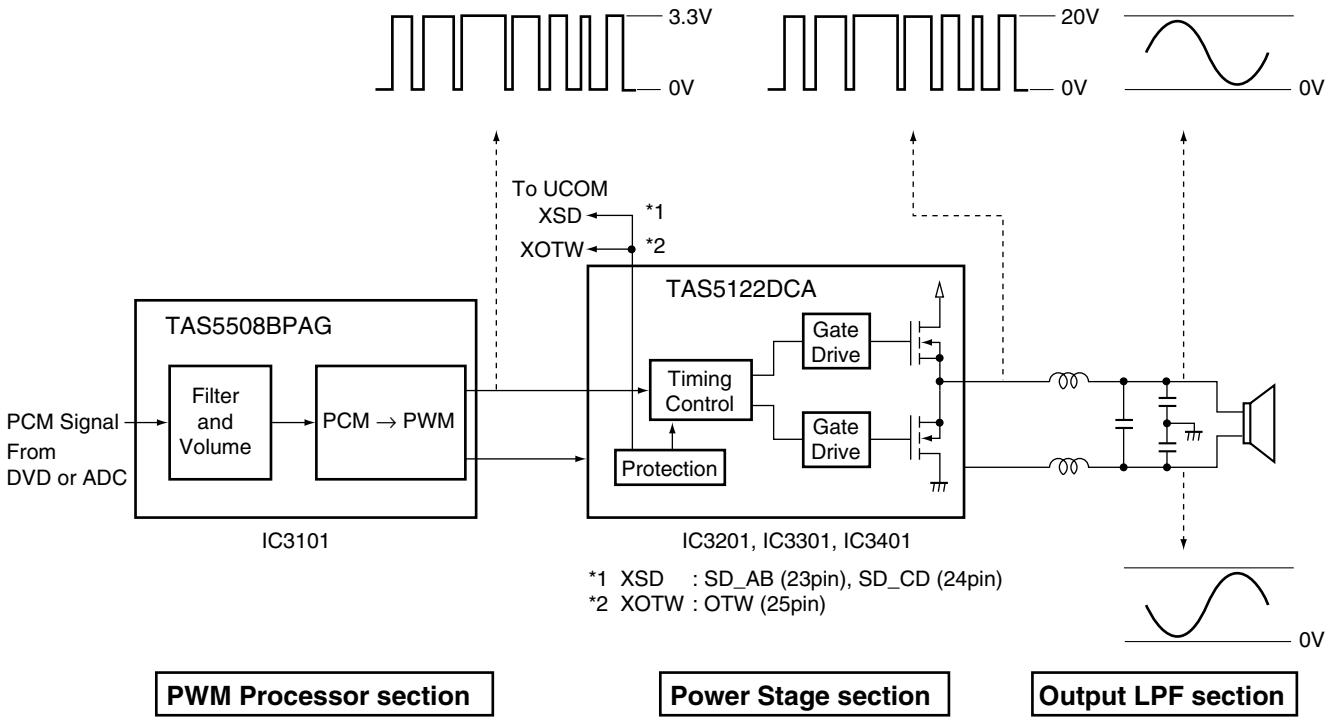


⑥ If the data cannot be read from the disc, "Disc Error!" is displayed on the screen, and the disc is ejected.



• Indication when the data have not been set
If no ID data are set after the ID number is changed, the message "NO DATA" flashes on the screen and FL display for a few seconds after the power is turned on or during Stop mode.

7.1.10 CIRCUIT DESCRIPTION OF DIGITAL AMP. SECTION



PWM Processor section

The PCM signals output from the DVD decoder or AD converter are input to this section, and their volume and sound quality are digitally adjusted. At the output stage, after conversion from PCM to PWM, the signals are output to the Power stage.

Power Stage section

In this section, timing is controlled so that the MOSFETs on the high and low sides will not be turned on simultaneously. The voltage of the PWM signals are raised to drive the gates of the MOSFET, and the PWM signals to drive the speakers are output from the MOSFET at the output stage. Detection and protection functions against short-circuiting of the output signals and temperature exceeding the standard value are also provided.

If the detection and protection work, the ports of the power stage ICs become the following state.

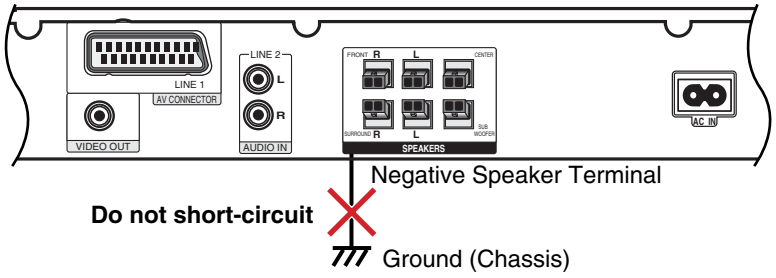
Power Stage ICs No.	Protection Enable State
IC3201	SD_AB (23pin) ⇒ L
IC3301	SD_CD (24pin) ⇒ L
IC3401	OTW (25pin) ⇒ L

Output LPF section

The carrier elements, high-frequency signals that are unnecessary for these speakers, are eliminated. The signals passed through the LPF will become sine-wave signals, as shown in the figure above.

Attention

As a signal to drive the BTL is output from the negative speaker terminal, DO NOT short-circuit between the negative speaker terminal and ground, such as the chassis.



7.1.11 SPECIFICATIONS FOR THE PROTECTION CIRCUITS FOR THE DIGITAL AMPLIFIER

The protection circuits for the Digital Amplifier are activated, following the specifications shown below. The error indication on the FL display shows the reason a protection circuit was activated.
Upon diagnosis of the Digital Amplifier, refer to the specifications for the protection circuits here and the overview of the Digital Amplifier circuitry.

1. Overview

The system microcomputer monitors the ports for shutdown requests (Pin 23:SD_AB and Pin 24: SD_CD) and the ports for abnormal-temperature detection (Pin 25: /OTW) of the Power Stage ICs (IC3201, IC3301, and IC3401). As soon as any abnormality is detected, it shuts the unit down.
To notify the user of the possibility of a too high a volume, when the unit is turned on the next time, the volume level will be set to 0, and an error message will be displayed on the FL display.

2. Ports on the system microcomputer to be used for detection

Pin 77: SHUTDOWN
Low voltage at this pin means overcurrent or voltage too low (= V+B27) at a Power Stage IC.

Pin 79: XOTW
Low voltage at this pin means the temperature at the Power Stage ICs exceeded 125°C.

Note: As one Power Stage IC is provided with two channels, three Power Stage ICs (in total 6 channels) are mounted in this unit. For abnormality detection, the unit implements a logical OR operation regarding these three ICs. Therefore, which IC is abnormal cannot be known directly. To find which IC is abnormal, it ischeck the PWM outputs (35, 38, 47, 50 pin) of the each power stage ICs (IC3201, IC3301, IC3401).

3. Detection timing

Start : Detection starts 500 ms after the PWRCONT 2 port (Pin 84) of the system microcomputer becomes active by your pressing the STANDBY/ON key.

Finish : When the STANDBY/ON key is pressed again (when the power-off process starts).

4. Operation of the protection circuits

The following three protection circuits are activated when the conditions shown below are met:

Overcurrent detection: Indication on the FL display: OC ERROR
Conditions: If the SHUTDOWN ports, which are monitored every 10 ms, become low 7 out of 10 times. (If they become low 7 times in succession, the conditions are met at that point.)

Abnormal temperature detection 1: Indication on the FL display: OVERTEMP
Conditions: If the XOTW ports, which are monitored every 10 ms, become low in succession for one minute.

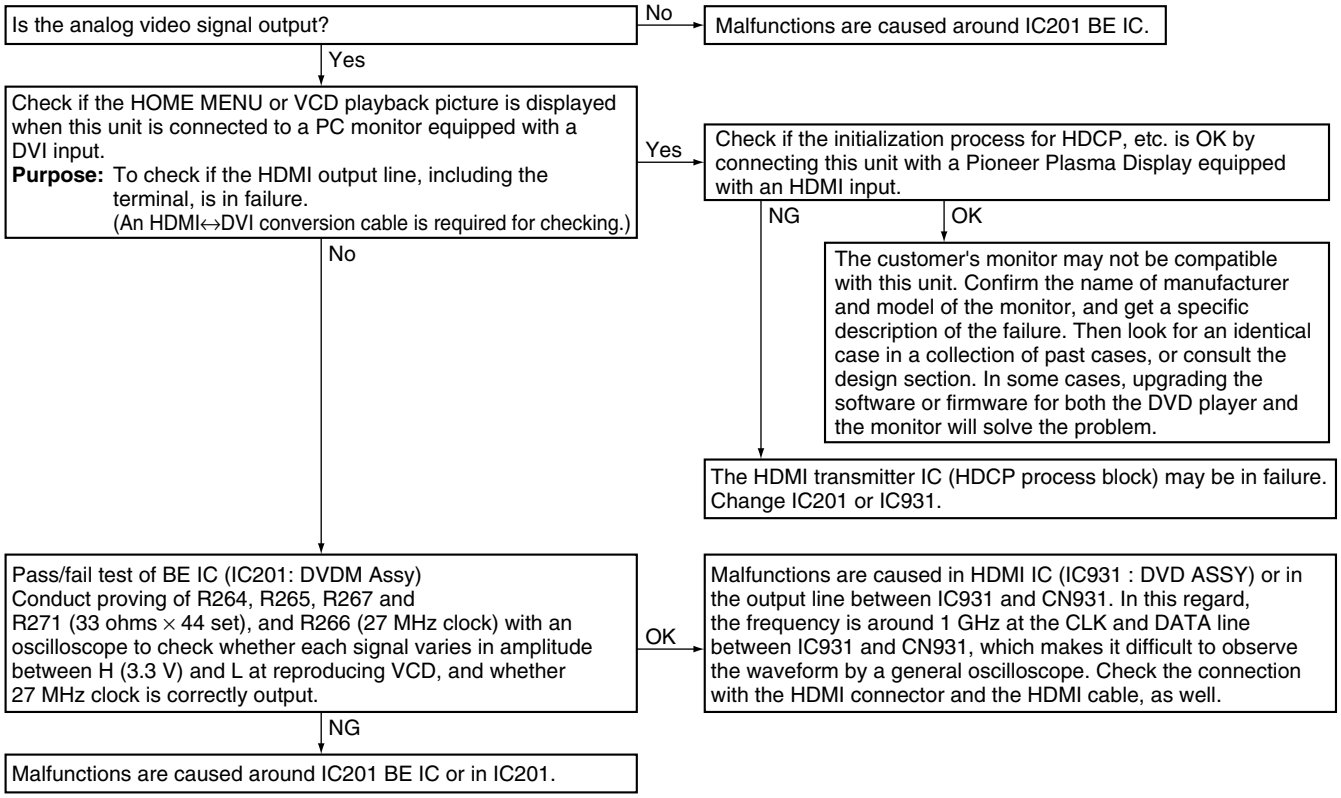
Abnormal temperature detection 2: Indication on the FL display: OVERTEMP
(Prerequisite: The XOTW ports, which are monitored every 10 ms, become low three times in succession.)
Conditions: The above prerequisite is upheld, and the conditions for an overcurrent detection are met.

5. Process when the protection circuits are activated

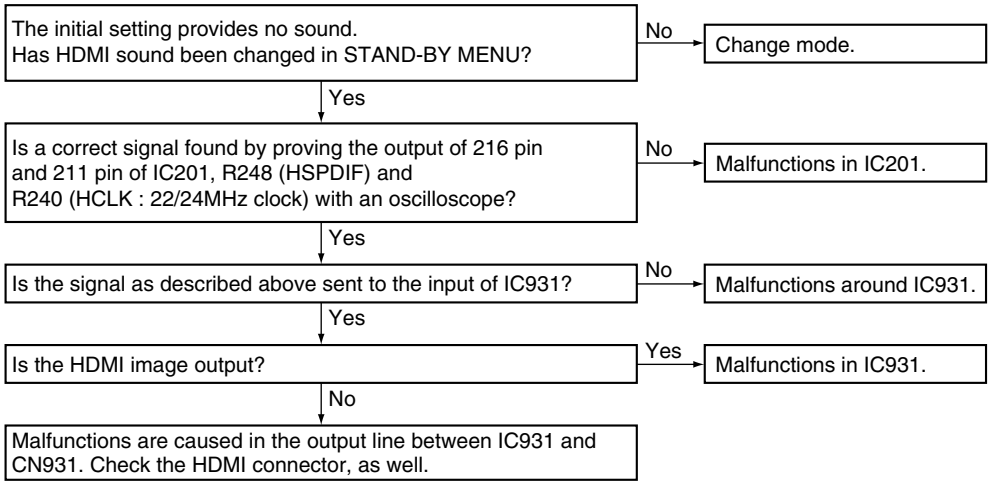
The unit is shut down within 30 ms after abnormality detection then the volume level is set to 0. The unit can be turned on immediately after the shutdown.

7.1.12 PASS/FAIL TEST PROCEDURE OF HDMI TRANSMITTER IC

1 In a case where the HDMI video signal is not output


Is the analog video signal output?
No
Malfunctions are caused around IC201 BE IC.
Yes
Check if the HOME MENU or VCD playback picture is displayed when this unit is connected to a PC monitor equipped with a DVI input.
Purpose: To check if the HDMI output line, including the terminal, is in failure.
(An HDMI↔DVI conversion cable is required for checking.)
Yes
Check if the initialization process for HDCP, etc. is OK by connecting this unit with a Pioneer Plasma Display equipped with an HDMI input.
NG
OK
The customer's monitor may not be compatible with this unit. Confirm the name of manufacturer and model of the monitor, and get a specific description of the failure. Then look for an identical case in a collection of past cases, or consult the design section. In some cases, upgrading the software or firmware for both the DVD player and the monitor will solve the problem.
No
The HDMI transmitter IC (HDCP process block) may be in failure. Change IC201 or IC931.
Pass/fail test of BE IC (IC201: DVDM Assy)
Conduct proving of R264, R265, R267 and R271 (33 ohms × 44 set), and R266 (27 MHz clock) with an oscilloscope to check whether each signal varies in amplitude between H (3.3 V) and L at reproducing VCD, and whether 27 MHz clock is correctly output.
OK
Malfunctions are caused in HDMI IC (IC931 : DVD ASSY) or in the output line between IC931 and CN931. In this regard, the frequency is around 1 GHz at the CLK and DATA line between IC931 and CN931, which makes it difficult to observe the waveform by a general oscilloscope. Check the connection with the HDMI connector and the HDMI cable, as well.
NG
Malfunctions are caused around IC201 BE IC or in IC201.

2 In a case where the HDMI audio signal is not output


The initial setting provides no sound.
Has HDMI sound been changed in STAND-BY MENU?
No
Change mode.
Yes
Is a correct signal found by proving the output of 216 pin and 211 pin of IC201, R248 (HSPDIF) and R240 (HCLK : 22/24MHz clock) with an oscilloscope?
No
Malfunctions in IC201.
Yes
Is the signal as described above sent to the input of IC931?
No
Malfunctions around IC931.
Yes
Is the HDMI image output?
Yes
Malfunctions in IC931.
No
Malfunctions are caused in the output line between IC931 and CN931. Check the HDMI connector, as well.

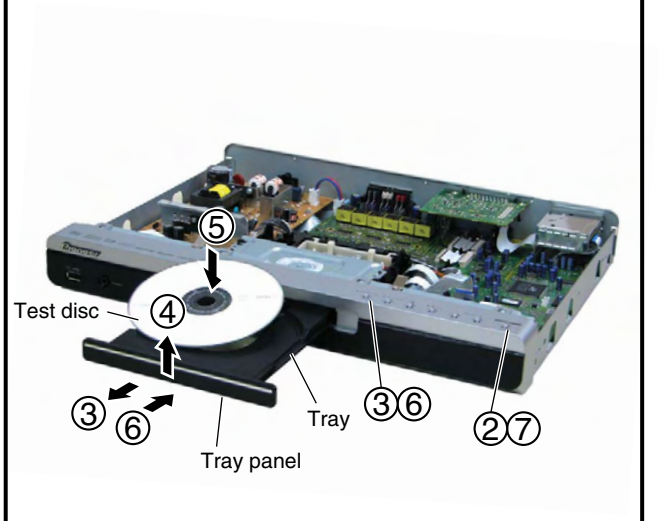
7.1.13 DISASSEMBLY

Note 1: Do NOT look directly into the pickup lens. The laser beam may cause eye injury.
Note 2: Even if the unit shown in the photos and illustrations in this manual may differ from your product, the procedures described here are common.

Diagnosis of PCB's

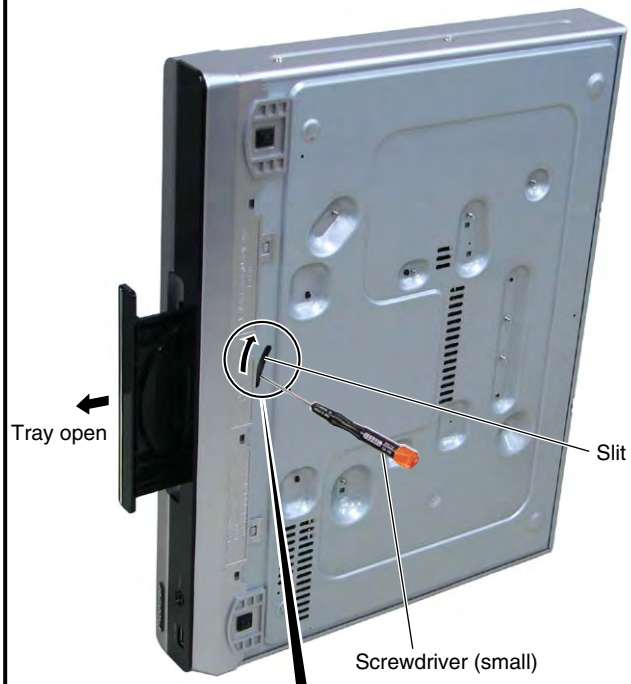
1 Bonnet Case, Tray Panel

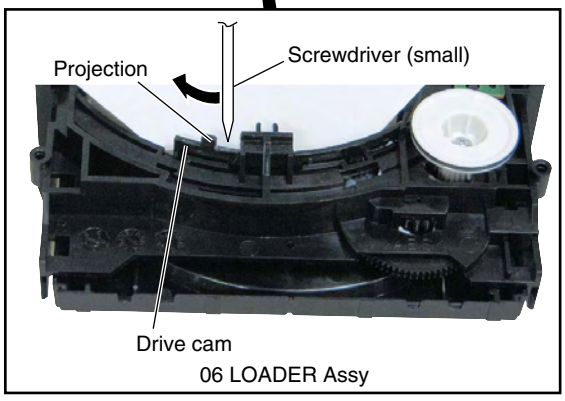
① Remove the bonnet case by removing the nine screws.
② Press the ⏻ STANDBY/ON button to turn on the power.
③ Press the ⏏ OPEN/CLOSE button to open the tray.
④ Remove the tray panel.
⑤ Set the test disc.
⑥ Press the ⏏ OPEN/CLOSE button to close the tray. (Test disc is clamped.)
⑦ Press the ⏻ STANDBY/ON button to turn off the power.
⑧ Pull out the Power cord.



● How to open the tray when the power cannot be on

Insert a screwdriver (small) into the slit located at the bottom of the unit, and slide the projection of the drive cam in the 06 LOADER Assy in the direction of the arrow, as indicated in the photo. If the tray pops out a little, fully pull it out by hand.

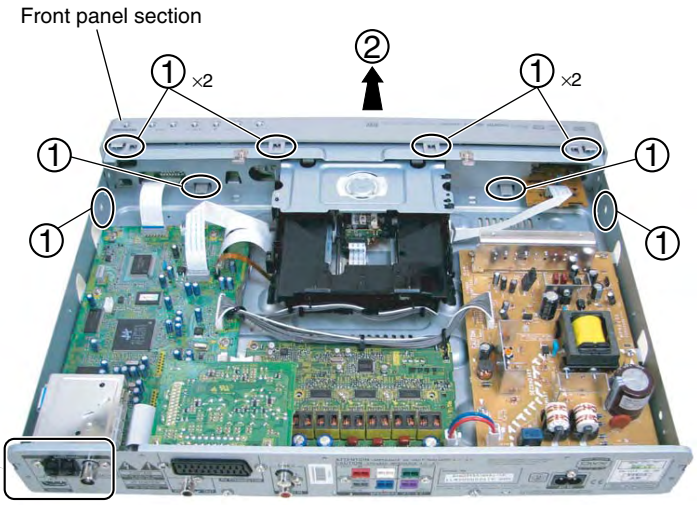




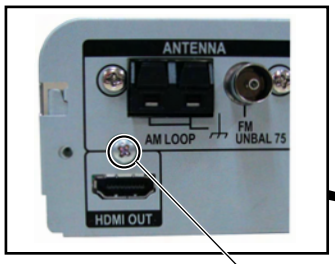
● Bottom view

2 Front panel section

① Remove the eight hooks.
② Remove the front panel section.



*Notes of assembly



Note: Do not use an electric screwdriver. If the screws are over-tightened, the screw threads may be damaged.

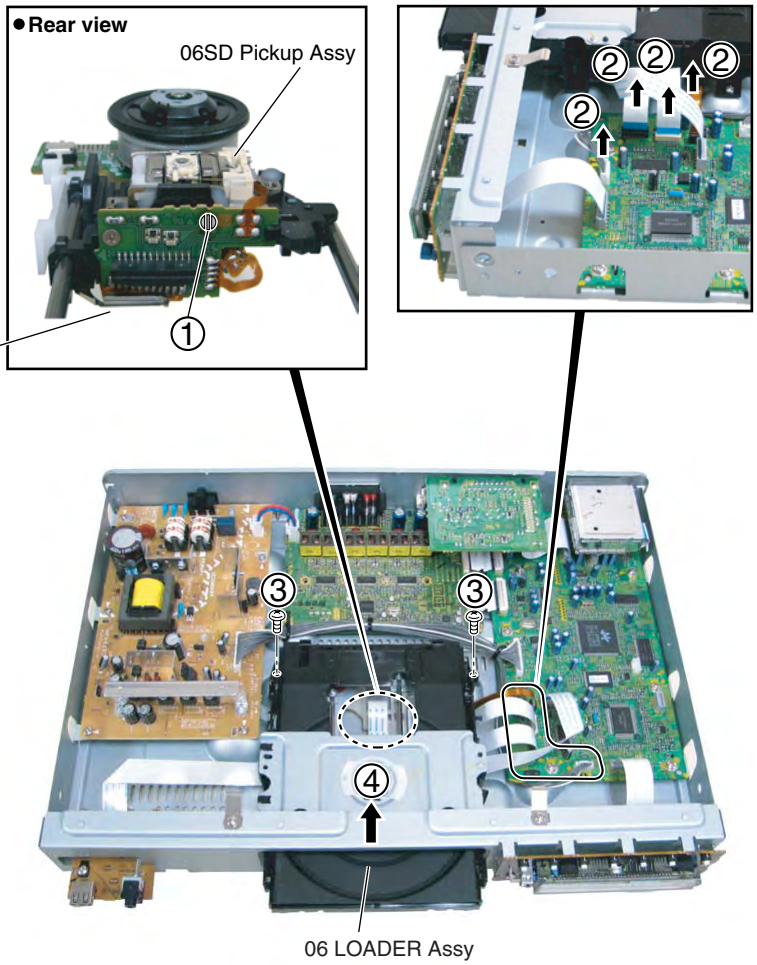
Removing the Traverse Mechanism Assy-S and 06SD Pickup Assy-S

1 06 LOADER Assy

① Short-circuit point by soldering.

Note: After replacement, connect the flexible cable, then remove the soldered joint (open).

② Disconnect the four connectors.
③ Remove the two screws.
④ Remove the 06 LOADER Assy.



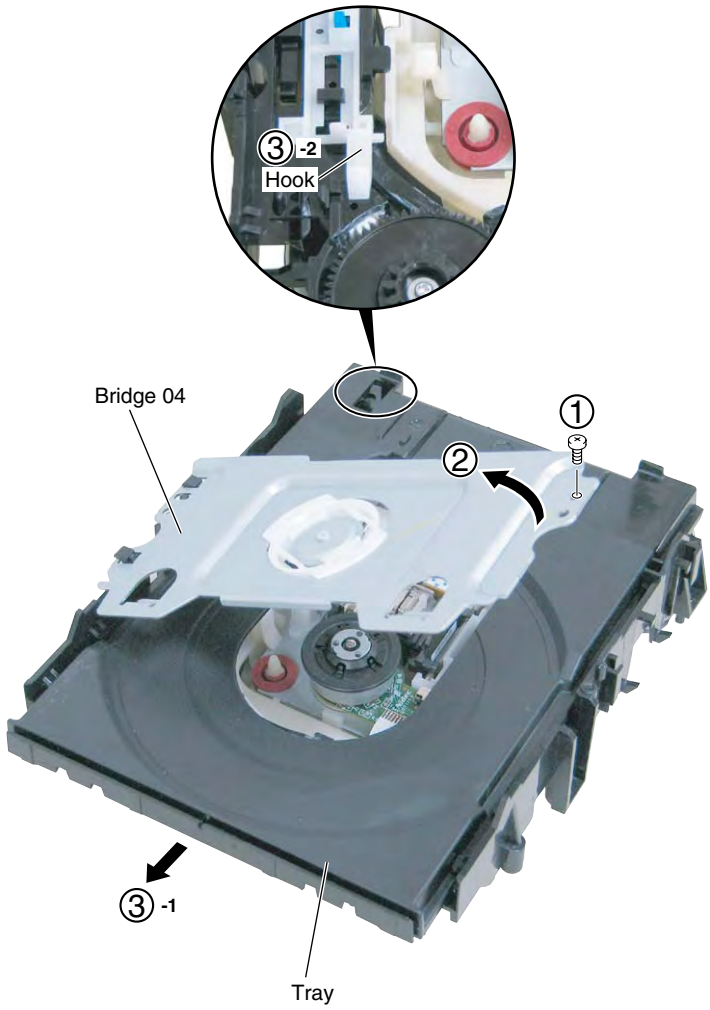
Note: Do not touch the bottom side of the 06SD Pickup Assy. If touched, the optical axis may be shifted.

2 Bridge 04, Tray

① Remove the one screw.

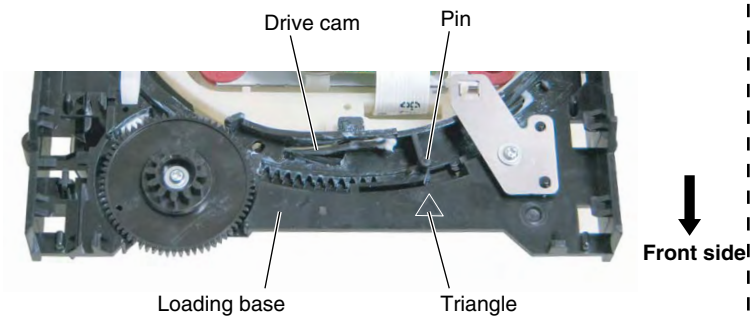
② Remove the bridge 04.

③ Pull out the tray, then remove it by pressing the hook.



Note when reinserting the tray

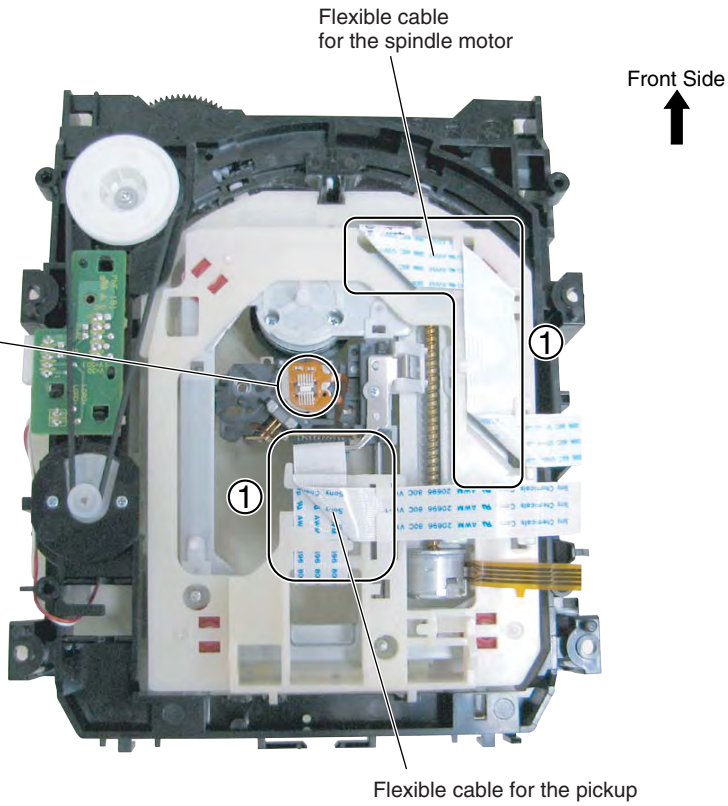
When reinserting the tray, first align the triangle printed on the loading base and the pin of the drive cam, then insert the tray.



3 Traverse Mechanism Assy-S

① Dislodge the two flexible cables from their factory placement.

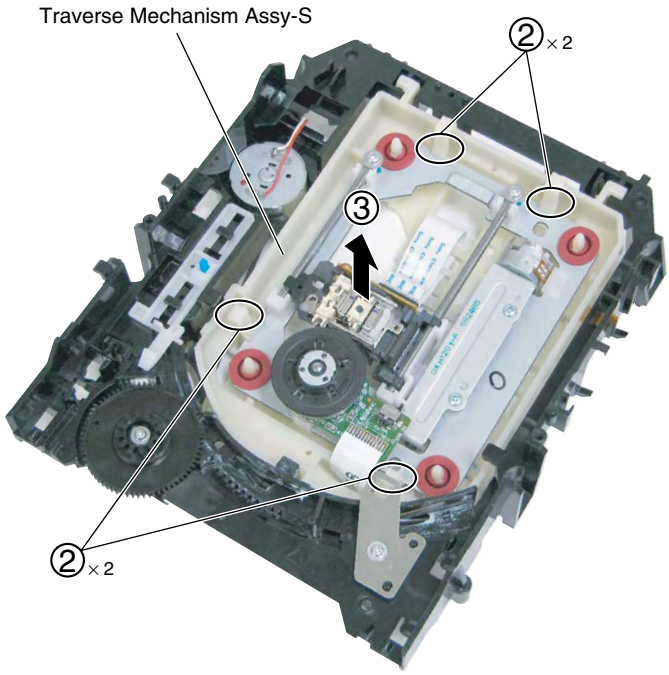
Note: Do not touch the IC for the optical axis. If touched, the optical axis may be shifted.



● **Bottom view**

② Unhook the four hooks.

③ Remove the Traverse Mechanism Assy-S.

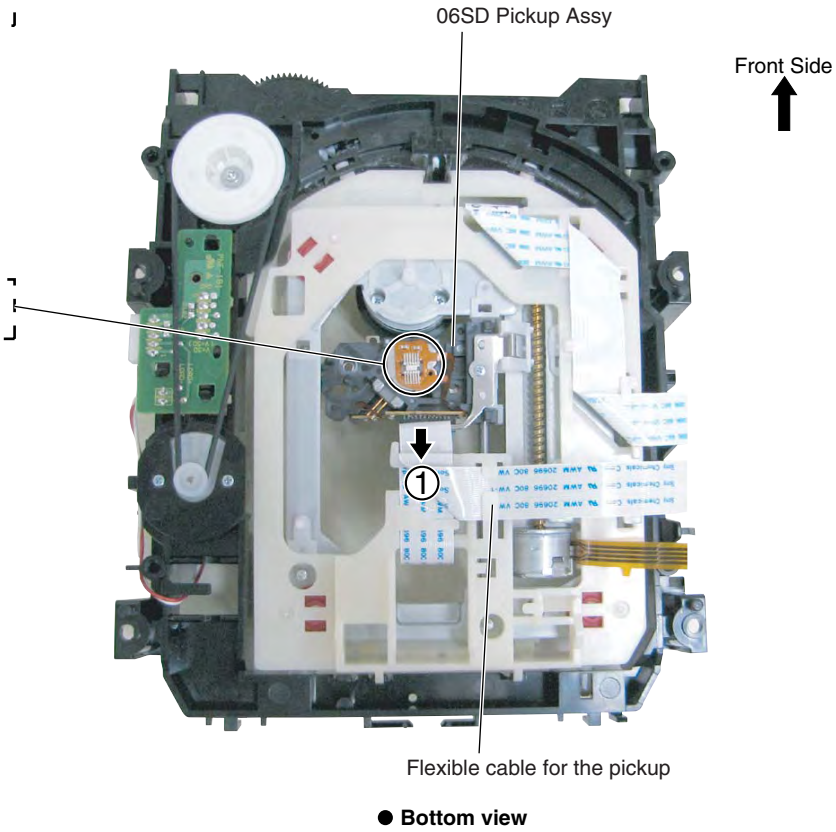


4 06SD Pickup Assy-S

Note: The 06SD Pickup Assy can be removed without removing the Traverse Mechanism Assy-S. (shown as Step 3.)

① Disconnect the flexible cable for the pickup.

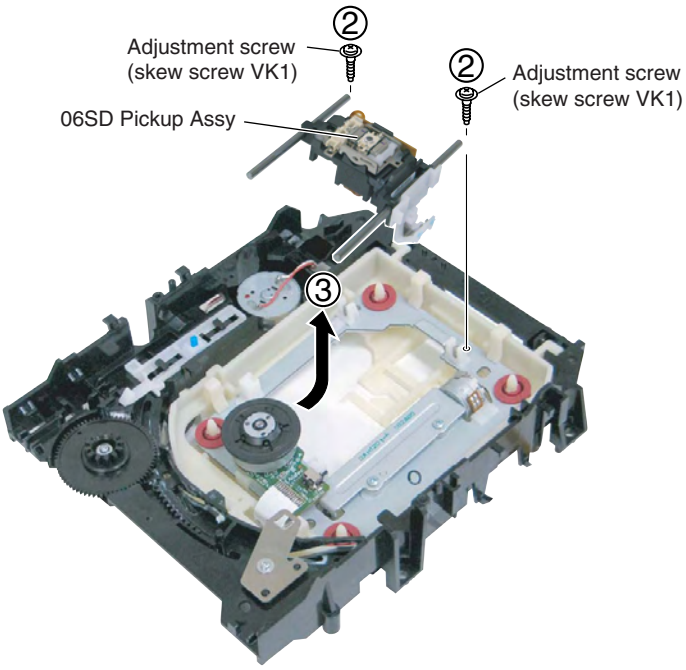
Note: Do not touch the IC for the optical axis. If touched, the optical axis may be shifted.



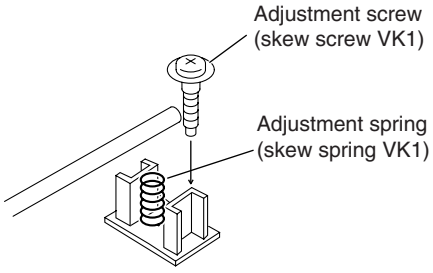
● **Bottom view**

② Remove the two adjustment screws.

③ Remove the 06SD Pickup Assy.

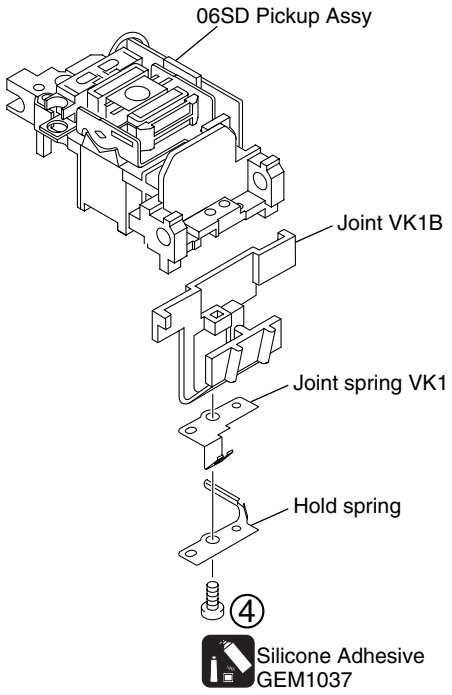


Note: Be careful not to lose the adjustment spring (skew spring VK1).



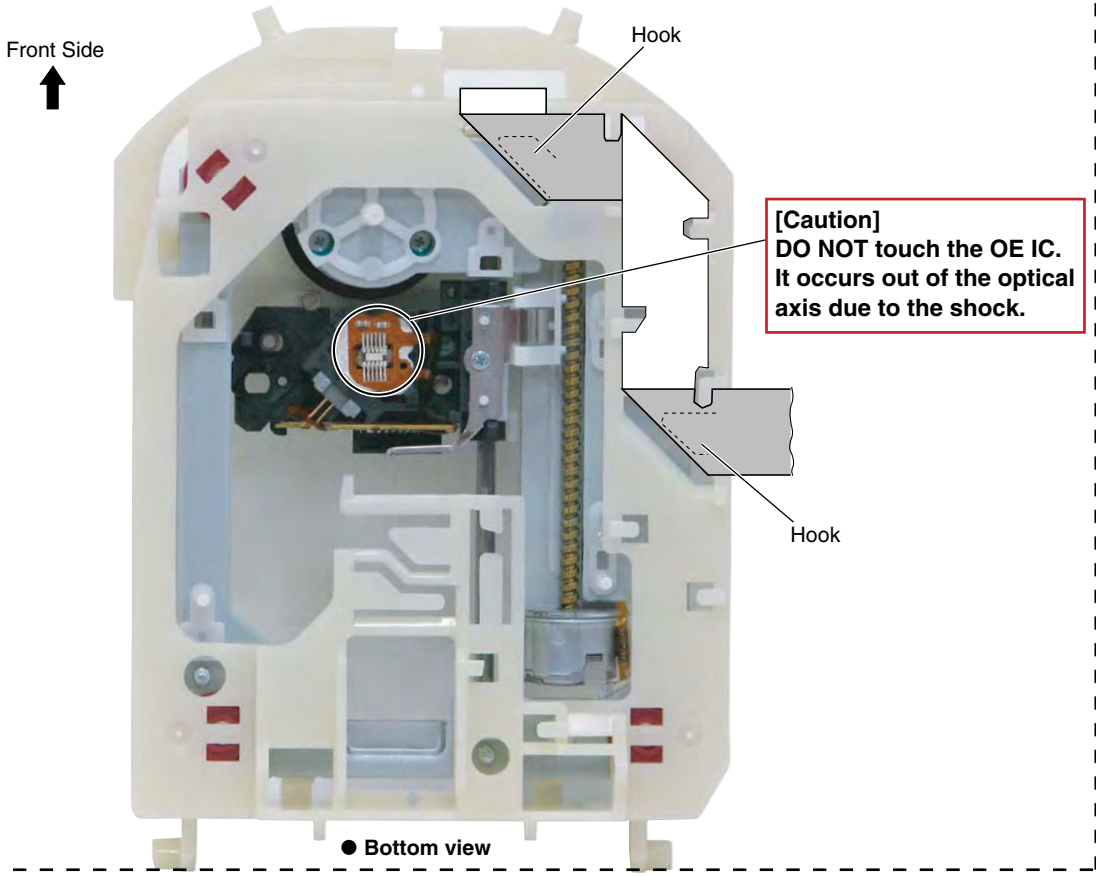
④ Remove the one screw.

Note: The screw is secured with the silicone adhesive.
Make sure to apply the silicone adhesive after reattaching the screw.



Arrangement of the flexible cable for the spindle motor

: Conductive surface

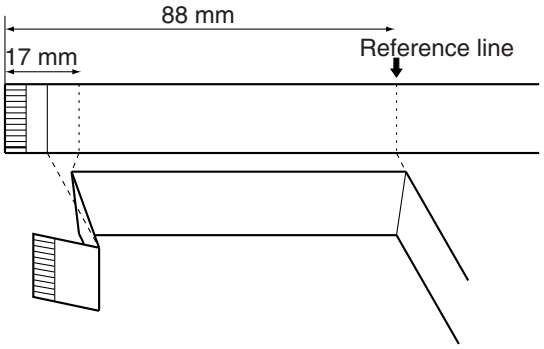


Arrangement of the flexible cable for the pickup

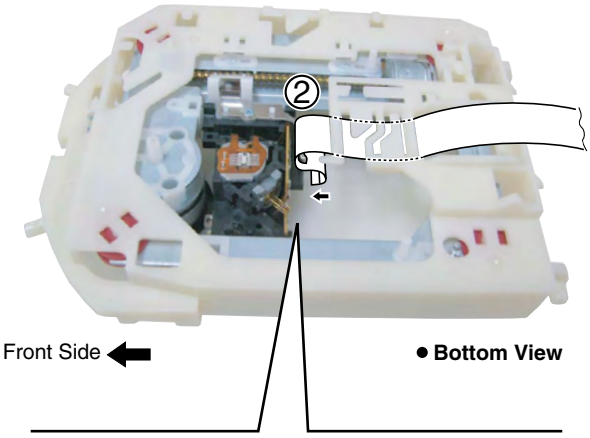
: Conductive surface

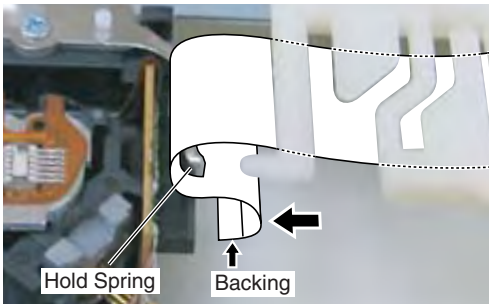
Note:
Be sure to move the 06SD Pickup Assy to the innermost perimeter.

① Fold the flexible cable for the pickup with the backing outward in the illustration below.

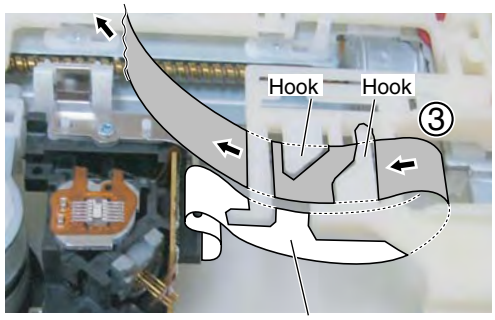


② Attach the flexible cable for the pickup to the connector.





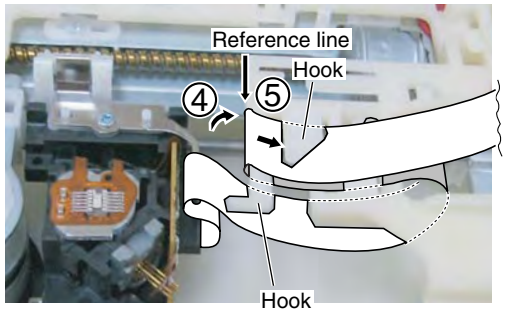
③ Pass the flexible cable through the hook.



Make sure that the cable is loose

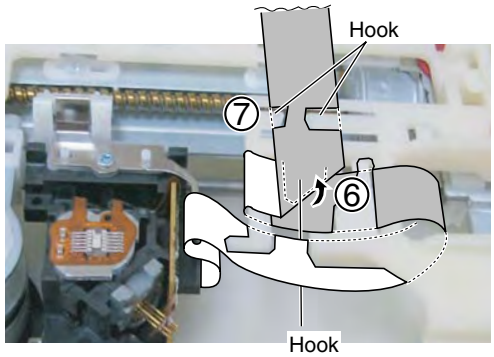
④ Hook the part folded in Step ① to the hook.

⑤ Pass the flexible cable through the hook.



⑥ Fold the flexible cable along the hook.

⑦ Pass the flexible cable through the hook.



7.2 PARTS
7.2.1 IC

• The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

• List of IC

PDC133A, MT1389FE/H-L, TAK5358ET

■ PDC133A (DVDMAIN ASSY : IC5501)

• System Control Microcomputer

● Pin Function

No.	Mark	Pin Name	I/O	Pin Function
1	PA3/WR#	FLDAT	O	Data for FL driver
2	PA4/RD#	XFLCS	O	Chip enable for FL driver
3	PA5/RS	FLCLK	O	Clock for FL driver
4	P70 / INT0 / T0LCP / AN8	ACDET	I	Powerdown Detection
5	P71 / INT1 / T0HCP / AN9	P_ON	I	REMOCON 2 (Power On)
6	P72 / INT2 / T0IN	RDSCLK	I (O)	Clock input from RDS decoder (Interruption 2)/ non-RDS model = Low output
7	P73 / INT3 / T0IN	REMOCON	I	REMOCON signal input (Interruption 3)
8	RES#	XRESET	I	μ -com reset input
9	XT1 / AN10	XT1	–	Subclock (connect to VDD when no use)
10	XT2 / AN11	XT2	–	Subclock (leave open when no use, and set the bit 6 of OCR SFR)
11	VSS1	VSS1	–	
12	CF1	CF1	–	Main Clock (connect to VDD when no use)
13	CF2	CF2	–	Main Clock (leave open when no use)
14	VDD1	VDD1	–	
15	P80 / AN0	SIMUKE	I	Destination distinction input
16	P81 / AN1	MODEL	I	Model distinction input
17	P82 / AN2	VDET	I	DVD3.3V detection input
18	P83 / AN3	KEY1	I	Key1 input
19	P84 / AN4	KEY2	I	Key2 input
20	P85 / AN5	DIRERR	O	LOCK/UNLOCK from DIR
21	P86 / AN6	PCONFIG	I	POWER CONFIG INPUT
22	P87 / AN7	XPROTECT	I	Protection and Fan Error detection input
23	P10 / SO0	DSPDI	O	Data output to DSP (MOTOROLA) and DIR
24	P11 / SI0 / SB0	DSPDO	O	Data input from DSP (MOTOROLA)
25	P12 / SCK0	DSPCK	O	Clock output to DSP (MOTOROLA) and DIR
26	P13 / SO1	XTVMUTE	O	Control mute of SCART (Audio)
27	P14 / SI1 / SB1	DASDA	I /O	I2C data for D-AMP
28	P15 / SCK1	DASCK	O	I2C clock for D-AMP
29	P16 / T1PWML	INPUTSELA	O	AUDIO INPUT SELECT A
30	P17 / T1PWMH/BUZ	INPUTSELB	O	AUDIO INPUT SELECT B
31	PE0	XHPMUTE	O	HP MUTE ON/OFF
32	PE1	XRECMUTE	O	REC OUTPUT MUTE ON/OFF
33	PE2	ADMD	O	Control of DSPMUTE combining DIRERR., "L" at digital mode, "H" at analog mode.
34	PE3	XADPDN	O	POWER DOWN for A/D
35	PE4	DSPMUTE	O	MUTE requeat to DSP MODULE
36	PE5	LED	O	Control of LED
37	PE6	XDEC MUTE	O	Detection of 1stDSP boot success from DSP MODULE
38	PE7	DSPHREQ	O	Error detection from DSP (MOTOROLA)
39	VSS4	VSS4	–	
40	VDD4	VDD4	–	

No.	Mark	Pin Name	I/O	Pin Function
41	PF0	BUSY	I	For MCACC FUNCTION
42	PF1	XFLAGS	I	Detect USB error?
43	PF2	STEST	I	Set TESTMODE for Service
44	PF3	UTEST	I	Set UNITCHECK for checker
45	PF4	XDSPSS	O	Slave selection to DSP(MOTOROLA)
46	PF5	XDSPRST	O	RESET to DSP(MOTOROLA) MODULE
47	PF6	DSPMODE	O	Selection of MCACC function
48	PF7	DATASEL	O	Data Selector for modulater
49	SI2P0/SO2	SDATA	O	System bus data output (AMP side output)
50	SI2P1/SI2/SB2	MDATA	I	System bus data input (AMP side input)
51	SI2P2/SCK2	SCLK	I	System bus clock input
52	SI2P3/SCK20	TXCE	O	Chip enable for tuner LSI
53	PWM1		O	
54	PWM0		O	
55	VDD2	VDD2	–	
56	VSS2	VSS2	–	
57	P00	EEP_CS	O	EEPROM CHIP SELECT
58	P01	EEP_DO	O	EEPROM DATA OUT
59	P02	(UTESTCHK)	O	for POWER CONFIG TEST / Unit TEST check
60	P03	EEP_SK	O	EEPROM CLOCK
61	P04	TXCLK	O	Clock for tuner LSI
62	P05	TXODATA	O	Data for tuner LSI
63	P06	(UTESTEEPOK)	O	for POWER CONFIG TEST / Unit TEST EEPROM check
64	P07	RDSPOW	O	Control power supply of RDS (L: POWER ON)
65	P20/INT4/T1IN	RDSDATA	I (O)	Input RDS data/ non-RDS model = Low output
66	P21/INT4/T1IN	TXIDATA	I	Input data from tuner LSI
67	P22/INT4/T1IN	DVDACK	I	Ackknowlegement from DVD MODULE(Interruption 4)
68	P23/INT4/T1IN	EEP_DI	I	EEPROM DATA IN
69	P24/INT5/T1IN	KEY1	I	Key1 input (PowerOn/Standby key only)
70	P25/INT5/T1IN	XDARST	O	RESET for D-AMP
71	P26/INT5/T1IN	XDAPDN	O	POWER DOWN for D-AMP
72	P27/INT5/T1IN	XDAMUTE	O	D-AMP MUTE (use only for non-DSP model)
73	P30	USBPOWER	O	Contorl Power Supply for USB
74	P31	(DIGSEL)	O	DIGITAL INPUT SELECT
75	P32/UTX1	SR+TX	O	UART Tx of SR+ function
76	P33/URX1	SR+RX	O	UART Rx of SR+ function
77	P34/UTX2	SHUTDWN	I	D-AMP SHUTDOWN detection
78	P35/URX2	XREADY	O	XREADY for DVD module
79	P36	XOTW	I	D-AMP Over Temperature Warning
80	PB7/D7	XDVDRST	O	RESET to DVD MODULE

No.	Mark	Pin Name	I/O	Pin Function
81	PB6/D6	DVDPOWER	O	Control power supply for DVD module
82	PB5/D5	HPSEL	O	TAS5508 HP_SEL
83	PB4/D4	HPDET	I	Detect to insert headphone
84	PB3/D3	PWRCONT	O	Power control for Sub SMPS
85	PB2/D2	(FLCONT)	O	FL Power
86	PB1/D1	BEATCUT1	O	BEATCUT Control 1
87	PB0/D0	BEATCUT2	O	BEATCUT Control 2
88	VSS3	VSS3	–	
89	VDD3	VDD3	–	
90	PC7/A7	FLASHE/D	I(O)	for FLASH writing / On board debugger
91	PC6/A6	FLASHDO	O	for FLASH writing / On board debugger
92	PC5/A5	FLASHCLK	O	for FLASH writing / On board debugger
93	PC4/A4	(SWMIX)	O	Control for subwoofer mix
94	PC3/A3	(UTESTMODE	O	for POWER CONFIG TEST /UNIT TEST MODE
95	PC2/A2	(DMUTECHECK)	O	D-AMP SOFT MUTE MONITOR
96	PC1/A1	FANCONT	O	Control fan speed
97	PC0/A0	(DTSMIX)	O	Control for dts mix
98	PA0/CS2#	XDIRRST	O	Reset to DIR /CODEC
99	PA1/CS1#	XDIRCS	O	Chip select to DIR/CODEC
100	PA2/CS0#	DIRDO	O	Data input from DIR/CODEC

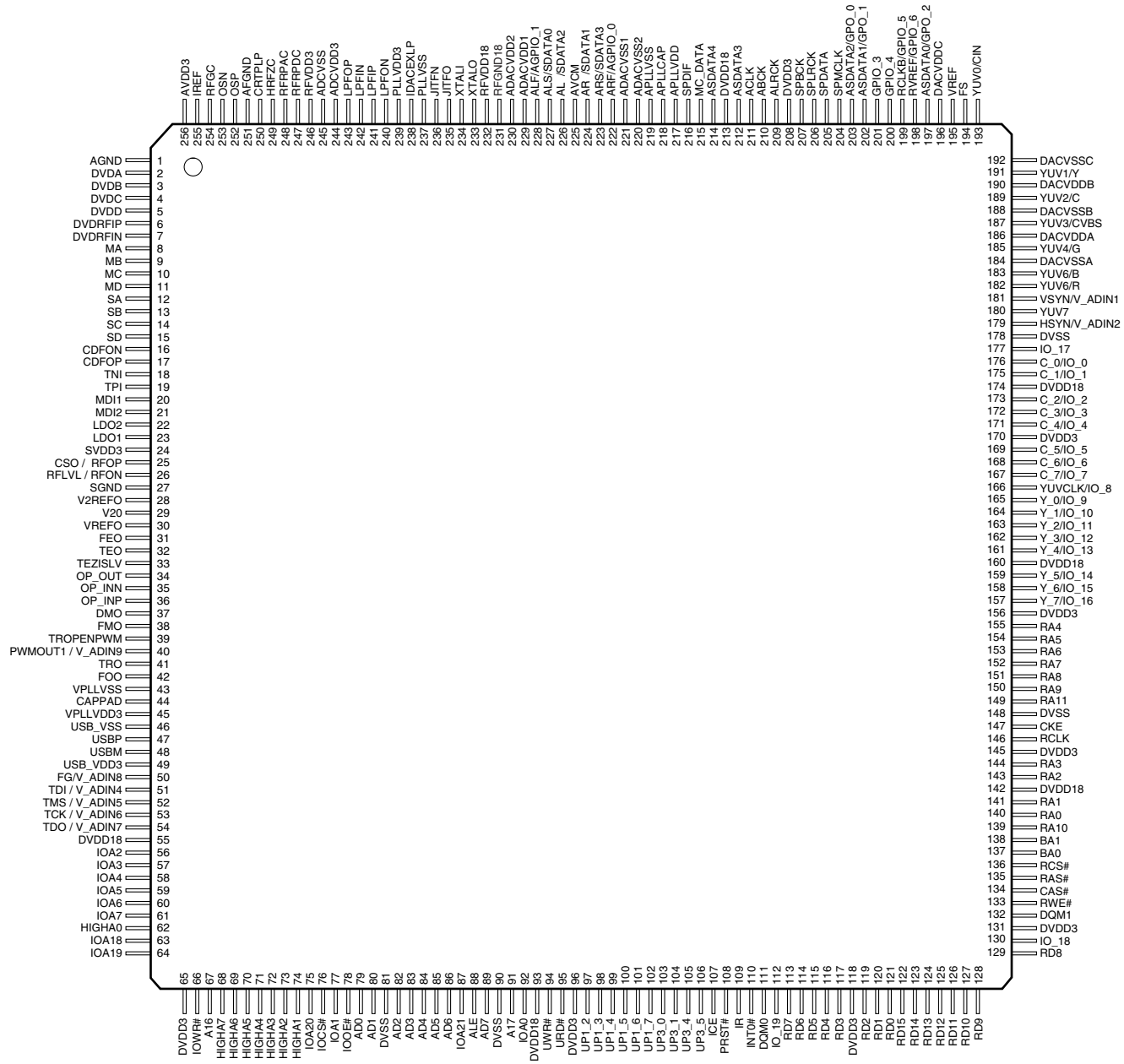
- Port0 (P00-P07) can be selected for input or output by each 4 bits (P00-P03,P04-P07). Set for input when reset. And it can be set C-MOS or Nch-OD by each 1 bit in option.
- Port1 (P10-P17) can be selected for input or output by each 1 bit. Set for input when reset. And it can be set C-MOS or Nch-OD by each 1bit in option.
- Port2 (P20-P27) can be selected for input or output by each 1 bit. Set for input when reset. And it can be set C-MOS or Nch-OD by each 1bit in option.
- Port3 (P30-P36) can be selected for input or output by each 1 bit. Set for input when reset. And it can be set C-MOS or Nch-OD by each 1 bit in option.
- Port7 (P70-P73) can be selected for input or output by each 1 bit. Set for input when reset.
- Port8 (P80-P87) can be selected for input or output by each 1 bit. Set for input when reset.
- PortA (PA0-PA5) can be selected for input or output by each 1 bit. Set for input when reset. And it can be set C-MOS or Nch-OD by each 1bit in option.
- PortB (PB0-PB7) can be selected for input or output by each 1 bit. Set for input when reset. And it can be set C-MOS or Nch-OD by each 1bit in option.
- PortC (PC0-PC7) can be selected for input or output by each 1 bit. Set for input when reset. And it can be set C-MOS or Nch-OD by each 1 bit in option.
- PortE and PortF can be selected for input or output by each 2 bits.

- In case of without RDS, it is best that RDSDATA and RDSCLK are assigned as I/O port which can be set output and output low level.

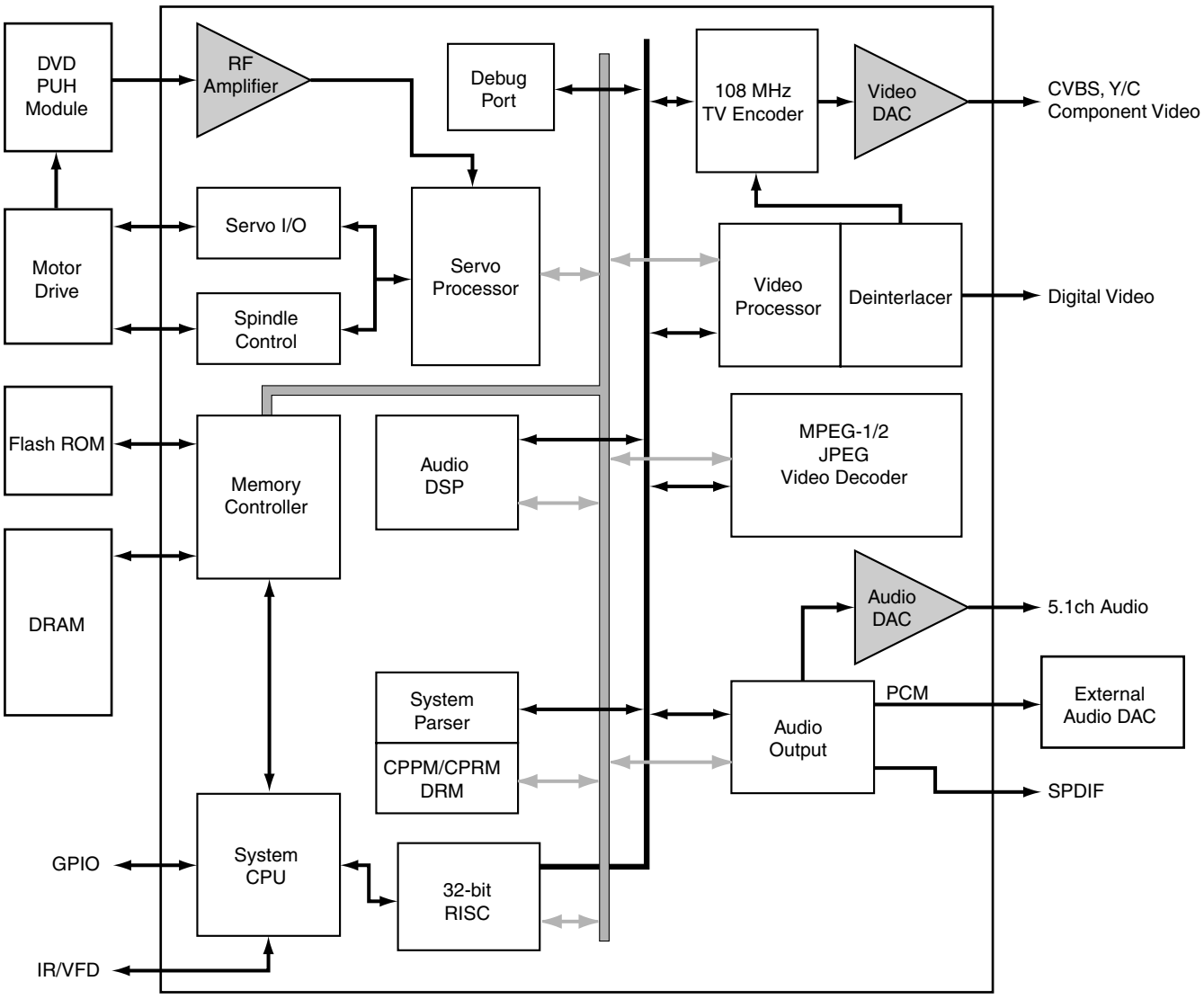
MT1389FE/H-L (DVDMAIN ASSY : IC201)

• DVD IC

● Pin Arrangement (Top view)



● Block Diagram



● Pin Function

■ RF Interface (28)

No.	Name	Alt.	I/O	Function
232	RFVDD18		Power	Analog power 1.8V
252	OSP		Analog output	RF Offset cancellation capacitor connecting
253	OSN		Analog output	RF Offset cancellation capacitor connecting
254	RFGC		Analog output	RF AGC loop capacitor connecting for DVD-ROM
255	IREF		Analog Input	Current reference input. It generates reference current for RF path. Connect an external 15K resistor to this pin and AVSS.
256	AVDD3		Power	Analog power 3.3V
1	AGND		Ground	Analog ground
2	DVDA		Analog Input	AC coupled input path A
3	DVDB		Analog Input	AC coupled input path B
4	DVDC		Analog Input	AC coupled input path C
5	DVDD		Analog Input	AC coupled input path D
6	DVDRFIP		Analog Input	AC coupled DVD RF signal input RFIP
7	DVDRFIN		Analog Input	AC coupled DVD RF signal input RFIN
8	MA		Analog Input	DC coupled main-beam RF signal input A
9	MB		Analog Input	DC coupled main-beam RF signal input B
10	MC		Analog Input	DC coupled main-beam RF signal input C
11	MD		Analog Input	DC coupled main-beam RF signal input D
12	SA		Analog Input	DC coupled sub-beam RF signal input A
13	SB		Analog Input	DC coupled sub-beam RF signal input B
14	SC		Analog Input	DC coupled sub-beam RF signal input C
15	SD		Analog Input	DC coupled sub-beam RF signal input D
16	CDFON		Analog Input	CD focusing error negative input
17	CDFOP		Analog Input	CD focusing error positive input
18	TNI		Analog Input	3 beam satellite PD signal negative input
19	TPI		Analog Input	3 beam satellite PD signal positive input

■ ALPC (4)

No.	Name	Alt.	I/O	Function
20	MDI1		Analog Input	Laser power monitor input
21	MDI2		Analog Input	Laser power monitor input
22	LDO2		Analog Output	Laser driver output
23	LDO1		Analog Output	Laser driver output

■ ADC Power (2)

No.	Name	Alt.	I/O	Function
244	ADCVDD3		Power	Analog 3.3V Power for ADC
245	ADCVSS		Ground	Analog ground for ADC

■ VPLL (3)

No.	Name	Alt.	I/O	Function
43	VPLLVSS		Ground	Analog ground for VPLL
44	CAPPAD		Analog Iutout	VPLL External Capacitance connection
45	VPLLVDD3		Power	Analog 3.3V Power for VPLL

■ Reference Voltage (3)

No.	Name	Alt.	I/O	Function
28	V2REFO		Analog output	Reference voltage 2.8V
29	V20		Analog output	Reference voltage 2.0V
30	VREFO		Analog output	Reference voltage 1.4V

■ **Analog Monitor Output (7)**

No.	Name	Alt.	I/O	Function
24	SVDD3		Power	Analog power 3.3V
25	CSO	RFOP	Analog output	Central servo Positive main beam summing output
26	RFLVL	RFON	Analog output	RFRP low pass, or Negative main beam summing output
27	SGND		Ground	Analog ground
31	FEO		Analog output	Focus error monitor output
32	TEO		Analog output	Tracking error monitor output
33	TEZISLV		Analog output	TE Slicing Level

■ **Analog Servo Interface (6)**

No.	Name	Alt.	I/O	Function
246	RFVDD3		Power	Analog Power
247	RFRPDC		Analog output	RF ripple detect output
248	RFRPAC		Analog Input	RF ripple detect input(through AC-coupling)
249	HRFZC		Analog Input	High frequency RF ripple zero crossing
250	CRTPLP		Analog output	Defect level filter capacitor connecting
251	RFGND		Ground	Analog Ground

■ **RF Data PLL Interface (9)**

No.	Name	Alt.	I/O	Function
235	JITFO		Analog output	The output terminal of RF jitter meter.
236	JITFN		Analog Input	The input terminal of RF jitter meter.
237	PLLVSS		Ground	Ground pin for data PLL and related analog circuitry.
238	IDACEXLP		Analog output	Data PLL DAC Low-pass filter
239	PLLVDD3		Power	Power pin for data PLL and related analog circuitry.
240	LPFON		Analog output	The negative output of loop filter amplifier
241	LPFIP		Analog Input	The positive input terminal of loop filter amplifier.
242	LPFIN		Analog Input	The negative input terminal of loop filter amplifier.
243	LPFOP		Analog output	The positive output of loop filter amplifier

■ **Motor and Actuator Driver Interface (10)**

No.	Name	Alt.	I/O	Function
34	OP_OUT		Analog output	Op amp output.
35	OP_INN		Analog input	Op amp negative input
36	OP_INP		Analog input	Op amp positive input
37	DMO		Analog output	Disk motor control output. PWM output.
38	FMO		Analog output	Feed motor control. PWM output.
39	TROPENPWM		Analog output	Tray PWM output / Tray open output.
40	PWMOUT1	V_ADIN9	Analog output	1st General PWM output, or Version AD input 9
41	TRO		Analog output	Tracking servo output. PDM output of tracking servo compensator.
42	FOO		Analog output	Focus servo output. PDM output of focus servo compensator
50	FG (Digital pin)	V_ADIN8	LVTTL 3.3V Input, Schmitt Input, pull up , with analog input path for V_ADIN8	Motor Hall sensor input, or Version AD input 8

■ General Power / Ground (18)

No.	Name	Alt.	I/O	Function
55, 93, 142, 160, 174, 213	DVDD18		Power	1.8V power pin for internal digital circuitry
81, 178	DVSS		Ground	1.8V Ground pin for internal digital circuitry
65, 96, 118, 131, 145, 156, 170, 208	DVDD3		Power	3.3V power pin for internal digital circuitry
90,148	DVSS		Ground	3.3V Ground pin for internal digital circuitry

■ Micro Controller and Flash Interface (48)

No.	Name	Alt.	I/O	Function
62	HIGHA0		Inout, 2-16MA, SR, PU	Microcontroller address 8
74	HIGHA1		Inout, 2-16MA, SR, PU	Microcontroller address 9
73	HIGHA2		Inout, 2-16MA, SR, PU	Microcontroller address 10
72	HIGHA3		Inout, 2-16MA, SR, PU	Microcontroller address 11
71	HIGHA4		Inout, 2-16MA, SR, PU	Microcontroller address 12
70	HIGHA5		Inout, 2-16MA, SR, PU	Microcontroller address 13
69	HIGHA6		Inout, 2-16MA, SR, PU	Microcontroller address 14
68	HIGHA7		Inout, 2-16MA, SR, PU	Microcontroller address 15
89	AD7		Inout, 2-16MA, SR	Microcontroller address/data 7
86	AD6		Inout, 2-16MA, SR	Microcontroller address/data 6
85	AD5		Inout, 2-16MA, SR	Microcontroller address/data 5
84	AD4		Inout, 2-16MA, SR	Microcontroller address/data 4
83	AD3		Inout, 2-16MA, SR	Microcontroller address/data 3
82	AD2		Inout, 2-16MA, SR	Microcontroller address/data 2
80	AD1		Inout, 2-16MA, SR	Microcontroller address/data 1
79	AD0		Inout, 2-16MA, SR	Microcontroller address/data 0
92	IOA0		Inout, 2-16MA, SR, PU	Microcontroller address 0 / IO
77	IOA1		Inout, 2-16MA, SR, PU	Microcontroller address 1 / IO
56	IOA2		Inout, 2-16MA, SR, PU	Microcontroller address 2 / IO
57	IOA3		Inout, 2-16MA, SR, PU	Microcontroller address 3 / IO
58	IOA4		Inout, 2-16MA, SR, PU	Microcontroller address 4 / IO
59	IOA5		Inout, 2-16MA, SR, PU	Microcontroller address 5 / IO
60	IOA6		Inout, 2-16MA, SR, PU	Microcontroller address 6 / IO
61	IOA7		Inout, 2-16MA, SR, PU	Microcontroller address 7 / IO
67	A16		Output, 2-16MA, SR	Flash address 16
91	A17		Output, 2-16MA, SR	Flash address 17
63	IOA18		Inout, 2-16MA, SR, SMT	Flash address 18 / IO
64	IOA19		Inout, 2-16MA, SR, SMT	Flash address 19 / IO
75	IOA20		Inout, 2-16MA, SR, SMT	Flash address 20 / IO
87	IOA21		Inout, 2-16MA,SR SMT	Flash address 21 / IO While External FLASH size <= 2MB: GPIO
88	ALE		Inout, 2-16MA, SR, PU, SMT	Microcontroller address latch enable
78	IOOE#		Inout, 2-16MA, SR, SMT	Flash output enable, active low / IO
66	IOWR#		Inout, 2-16MA, SR, SMT	Flash write enable, active low / IO
76	IOCS#		Inout, 2-16MA, SR PU,SMT	Flash chip select, active low / IO

No.	Name	Alt.	I/O	Function
94	UWR#		Inout, 2-16MA, SR, PU, SMT	Microcontroller write strobe, active low
95	URD#		Inout, 2-16MA, SR, PU, SMT	Microcontroller read strobe, active low
97	UP1_2		Inout, 4MA, SR, PU, SMT	Microcontroller port 1-2
98	UP1_3		Inout, 4MA, SR, PU, SMT	Microcontroller port 1-3
99	UP1_4		Inout, 4MA, SR, PU, SMT	Microcontroller port 1-4
100	UP1_5		Inout, 4MA, SR, PU, SMT	Microcontroller port 1-5
101	UP1_6	SCL	Inout, 4MA, SR, PU, SMT	Microcontroller port 1-6 I^2C clock pin
102	UP1_7	SDA	Inout, 4MA, SR, PU, SMT	Microcontroller port 1-7 I^2C data pin
103	UP3_0	RXD	Inout, 4MA, SR, PU, SMT	Microcontroller port 3-0 8032 RS232 RXD
104	UP3_1	TXD	Inout, 4MA, SR, PU, SMT	Microcontroller port 3-1 8032 RS232 TXD
105	UP3_4	RXD SCL	Inout, 4MA, SR, PU, SMT	Microcontroller port 3-4 Hardwired RD232 RXD I2C clock pin
106	UP3_5	TXD SDA	Inout, 4MA, SR, PU, SMT	Microcontroller port 3-5 Hardwired RD232 TXD I^2C data pin
109	IR		Input, SMT	IR control signal input
110	INT0#		Inout, 2-16MA, SR, PU, SMT	Microcontroller external interrupt 0, active low

■ **Audio Interface (28)**

No.	Name	Alt.	I/O	Function
204	SPMCLK	SCLK0	Inout Non-pull	Audio DAC master clock of SPDIF input While SPDIF input is not used: Serial interface port 0 clock pin GPIO
205	SPDATA	SDIN0	Inout Non-pull	Audio data of SPDIF input While SPDIF input is not used: Serial interface port 0 data-in GPIO
206	SPLRCK	SDO0	Inout Non-pull	Audio left/right channel clock of SPDIF input While SPDIF input is not used: Serial interface port 0 data-out GPIO
207	SPBCK	SDCS0	Inout Non-pull	Audio bit clock of SPDIF input While SPDIF input is not used: Serial interface port 0 chip select GPIO
209	ALRCK		Inout 4MA, PD, SMT	Audio left/right channel clock Trap value in power-on reset: 1 : use external 373 0: use internal 373
210	ABCK	Fs64	Output 4MA, Non-pull	Audio bit clock Phase de-modulation
211	ACLK		Inout, 4MA, Non-pull	Audio DAC master clock
197	ASDATA0		Inout, 4MA, PD SMT	Audio serial data 0 (Front-Left/Front-Right) Trap value in power-on reset : 1 : manufactory test mode 0 : normal operation While using external channels: GPO_2
202	ASDATA1		Inout, 4MA, PD SMT	Audio serial data 1 (Left-Surround/Right-Surround) Trap value in power-on reset : 1 : manufactory test mode 0 : normal operation While using external channels: GPO_1
203	ASDATA2		Inout, 4MA, PD SMT	Audio serial data 2 (Center/LFE) Trap value in power-on reset : 1 : manufactory test mode 0 : normal operation While using external channels: GPO_0
212	ASDATA3		Inout, 4MA, PD SMT	Audio serial data 3 (Center-back/ Center-left-back/Center-right-back, in 6.1 or 7.1 mode) Trap value in power-on reset : 1 : manufactory test mode 0 : normal operation While only 2 channels output: GPIO
214	ASDATA4	INT1#	Inout, 4MA, PD SMT	Audio serial data 4 (Down-mixed Left/Right) Trap value in power-on reset : 1 : manufactory test mode 0 : normal operation While only 2 channels output: Microcontroller external interrupt 1 GPIO
215	MC_DATA	INT2#	Inout PD SMT	Microphone serial input While not support Microphone: Microcontroller external interrupt 2 GPIO
216	SPDIF		Output, 2-16MA, SR : ON/OFF Non-pull	SPDIF output
217	APLLVDD3		Power	3.3V Power pin for audio clock circuitry
218	APLLCAP		Analog Inout	APLL External Capacitance connection

■ **Video Interface (18)**

No.	Name	Alt.	I/O	Function
219	APLLVSS		Ground	Ground pin for audio clock circuitry
220	ADACVSS2		Ground	Ground pin for AUDIO DAC circuitry
221	ADACVSS1		Ground	Ground pin for AUDIO DAC circuitry
222	ARF	GPIO	Output	AUDIO DAC Sub-woofer channel output While internal AUDIO DAC not used:GPIO
223	ARS	GPIO	Output	AUDIO DAC Right Surround channel output While internal AUDIO DAC not used: SDATA3 GPIO
224	AR	GPIO	Output	AUDIO DAC Right channel output While internal AUDIO DAC not used: SDATA1 GPIO
225	AVCM		Analog	AUDIO DAC reference voltage
226	AL	GPIO	Output	AUDIO DAC Left Surround channel output While internal AUDIO DAC not used: SDATA2 GPIO
227	ALS	GPIO	Output	AUDIO DAC Left Surround channel output While internal AUDIO DAC not used: SDATA0 GPIO
228	ALF	GPIO	Output	AUDIO DAC Center channel output While internal AUDIO DAC not used: GPIO
229	ADACVDD1		Power	3.3V power pin for AUDIO DAC circuitry
230	ADACVDD2		Power	3.3V power pin for AUDIO DAC circuitry

■ **Video Interface (18)**

No.	Name	Alt.	I/O	Function
196	DACVDDC		Power	3.3V power pin for VIDEO DAC circuitry
195	VREF		Analog	Bandgap reference voltage
194	FS		Analog	Full scale adjustment
193	YUV0	CIN	Output 4MA, SR	Video data output bit 0 Compensation capacitor
192	DACVSSC		Ground	Ground pin for VIDEO DAC circuitry
191	YUV1	Y	Output 4MA, SR	Video data output bit 1 Analog Y output
190	DACVDDB		Power	3.3V power pin for VIDEO DAC circuitry
189	YUV2	C	Output 4MA, SR	Video data output bit 2 Analog chroma output
188	DACVSSB		Ground	Ground pin for VIDEO DAC circuitry
187	YUV3	CVBS	Output 4MA, SR	Video data output bit 3 Analog composite output
186	DACVDDA		Power	3.3V power pin for VIDEO DAC circuitry
185	YUV4	Y/G	Output 4MA, SR	Video data output bit 4 Green or Y
184	DACVSSA		Ground	Ground pin for VIDEO DAC circuitry
183	YUV5	B/Cb/Pb	Output 4MA, SR	Video data output bit 5 Blue or CB
182	YUV6	R/Cr/Pr	Output 4MA, SR	Video data output bit 6 Red or CR
181	YSYN	V_ADIN1	Inout 4MA,SR SMT Non-pull	Vertical sync input/output While no External TV-encoder: Vertical sync for video-input Version AD input port 1 GPIO

■ **DRAM Interface (63)(sorted by position)**

No.	Name	Alt.	I/O	Function
180	YUV7	INT3#	Inout 4MA,SR SMT Non-pull	Video data output bit 7 While no External TV-encoder. Microcontroller external interrupt3 GPIO
179	HSYN	INT4# V_ADIN2	Inout 4MA,SR SMT Non-pull	Horizontal sync input/output While no External TV-encoder. Horizontal sync for video-input Microcontroller external interrupt4 Version AD input port2 GPIO

■ **MISC (12)**

No.	Name	Alt.	I/O	Function
46	USB_VSS		USB Ground	USB ground pin
47	USBP		Analog inout	USB port DPLUS analog pin
48	USBM		Analog inout	USB port DMINUS analog pin
49	USB_VDD3		USB Power	USB Power pin 3.3V
108	PRST#		Input PU,SMT	Power on reset input, active low.
107	ICE		Inout PD,SMT	Microcontroller ICE mode enable
233	XTALO		Output	27M crystal out
234	XTALI		Inout	27M crystal in
201	GPIO_3		Inout Pull-Down	GPIO
200	GPIO_4		Inout Pull-Down	GPIO
199	RCLKB	GPIO_5	Inout Pull-Up	GPIO
198	RVREF	GPIO_6	Inout Pull-Up	GPIO

■ **Dram Interface (58)(Sorted by position)**

No.	Name	Alt.	I/O	Function
176	C_0	IO_0 (RD16)	Inout Non-pull	Digital Video output C bit 0 GPIO
175	C_1	IO_1 (RD17)	Inout Non-pull	Digital Video output C bit 1 GPIO
173	C_2	IO_2 (RD18)	Inout Non-pull	Digital Video output C bit 2 GPIO
172	C_3	IO_3 (RD19)	Inout Non-pull	Digital Video output C bit 3 GPIO
171	C_4	IO_4 (RD20)	Inout Non-pull	Digital Video output C bit 4 GPIO
169	C_5	IO_5 (RD21)	Inout Non-pull	Digital Video output C bit 5 GPIO
168	C_6	IO_6 (RD22)	Inout Non-pull	Digital Video output C bit 6 GPIO
167	C_7	IO_7 (RD23)	Inout Non-pull	Digital Video output C bit 7 GPIO
177	IO_17	(DQM2)	Inout Pull-Up	GPIO

No.	Name	Alt.	I/O	Function
166	YUVCLK	IO_8 (DQM3)	Inout Pull-Up	Digital Video output Clock GPIO
165	Y_0	IO_9 (PD24)	Inout Non-Pull	Digital Video output Y bit 0 GPIO
164	Y_1	IO_10 (PD25)	Inout Non-Pull	Digital Video output Y bit 1 GPIO
163	Y_2	IO_11 (PD26)	Inout Non-Pull	Digital Video output Y bit 2 GPIO
162	Y_3	IO_12 (PD27)	Inout Non-Pull	Digital Video output Y bit 3 GPIO
161	Y_4	IO_13 (PD28)	Inout Non-Pull	Digital Video output Y bit 4 GPIO
159	Y_5	IO_14 (PD29)	Inout Non-Pull	Digital Video output Y bit 5 GPIO
158	Y_6	IO_15 (PD30)	Inout Non-Pull	Digital Video output Y bit 6 GPIO
157	Y_7	IO_16 (PD31)	Inout Non-Pull	Digital Video output Y bit 7 GPIO
155	RA4		Inout	DRAM address 4
154	RA5		Inout	DRAM address 5
153	RA6		Inout	DRAM address 6
152	RA7		Inout	DRAM address 7
151	RA8		Inout	DRAM address 8
150	RA9		Inout	DRAM address 9
149	RA11		Inout Pull-Down	DRAM address bit 11
147	CKE		output	DRAM clock enable
146	RCLK		Inout	Dram clock
144	RA3		Inout	DRAM address 3
143	RA2		Inout	DRAM address 2
141	RA1		Inout	DRAM address 1
140	RA0		Inout	DRAM address 0
139	RA10		Inout	DRAM address 10
138	BA1		Inout	DRAM bank address 1
137	BA0		Inout	DRAM bank address 0
136	RCS#		output	DRAM chip select, active low
135	RAS#		output	DRAM row address strobe, active low
134	CAS#		output	DRAM column address strobe, active low
133	RWE#		output	DRAM Write enable, active low
132	DQM1		Input	Data mask 1
130	IO_18	(DQS1)	Inout Non-pull	GPIO
129	RD8		Inout	DRAM data 8
128	RD9		Inout	DRAM data 9
127	RD10		Inout	DRAM data 10
126	RD11		Inout	DRAM data 11
125	RD12		Inout	DRAM data 12
124	RD13		Inout	DRAM data 13
123	RD14		Inout	DRAM data 14
122	RD15		Inout	DRAM data 15
121	RD0		Inout	DRAM data 0

No.	Name	Alt.	I/O	Function
120	RD1		Inout	DRAM data 1
119	RD2		Inout	DRAM data 2
117	RD3		Inout	DRAM data 3
116	RD4		Inout	DRAM data 4
115	RD5		Inout	DRAM data 5
114	RD6		Inout	DRAM data 6
113	RD7		Inout	DRAM data 7
112	IO_19	(DQS0)	Inout Non-Pull	GPIO
111	DQM0		Inout	Data mask 0

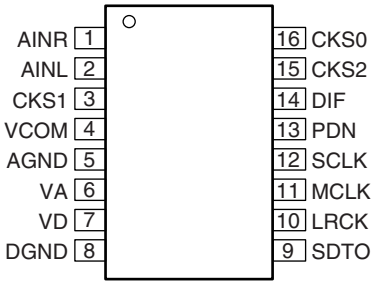
■ JTAG Interface (4)

No.	Name	Alt.	I/O	Function
51	TDI	V_ADIN4	Inout Non-Pull	Serial interface port 3 data-out Version AD input port 4 GPIO
52	TMS	V_ADIN5	Inout Non-Pull	Serial interface port 3 data-in Version AD input port 5 GPIO
53	TCK	V_ADIN6	Inout Non-Pull	Serial interface port 3 clock pin Version AD input port 6 GPIO
54	TDO	V_ADIN7	Inout Non-Pull	Serial interface port 3 chip-select Version AD input port 7 GPO

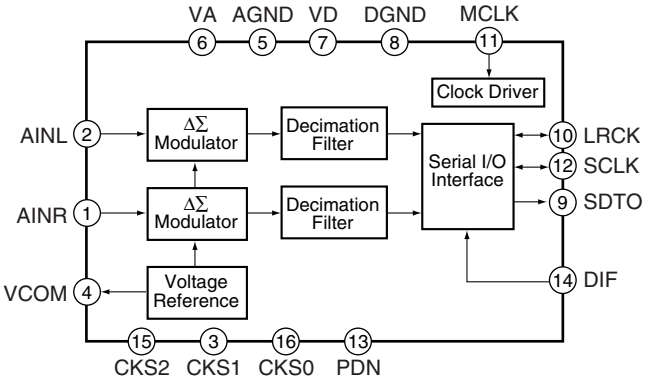
■ AK5358ET (DVDMAIN ASSY : IC3003)

• 96kHz 24-Bit ΔΣ ADC

● Pin Arrangement (Top view)



● Block Diagram

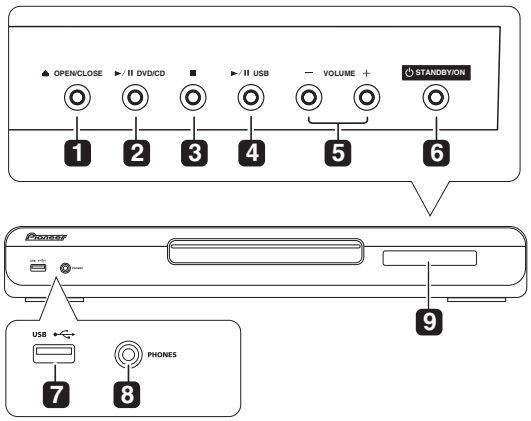


● Pin Function

No.	Pin Name	I/O	Pin Function
1	AINR	I	R ch analog input
2	AINL	I	L ch analog input
3	CKS1	I	Mode select 1
4	VCOM	O	Common voltage output, VA/2 bias voltage of ADC input
5	AGND	–	Analog Ground
6	VA	–	Analog power supply, 4.5-5.5V
7	VD	–	Digital power supply, 2.7-5.5V
8	DGND	–	Digital ground
9	SDTO	O	Audio serial data output "L" output at power-down mode.
10	LRCK	I/O	Output channel clock "L" output in master mode at power-down mode.
11	MCLK	I	Master clock input
12	SCLK	I/O	Audio serial data clock "L" output in master mode at power-down mode.
13	PDN	I	Power down mode "H": Power up, "L": Power down
14	DIF	I	Audio interface format "H": 24bit I^2S compatible, "L": 24bit MSB justified
15	CKS2	I	Mode select 2
16	CKS0	I	Mode select 0

8. PANEL FACILITIES

Front panel



1 ⏏ OPEN/CLOSE
Opens/closes the disc tray.

2 ▶/❚❚ DVD/CD
Selects the **DVD/CD** function and starts/pauses/resumes playback.

3 ■
Stops playback.

4 ▶/❚❚ USB
Selects the **USB** function and starts/pauses playback.

5 VOLUME buttons

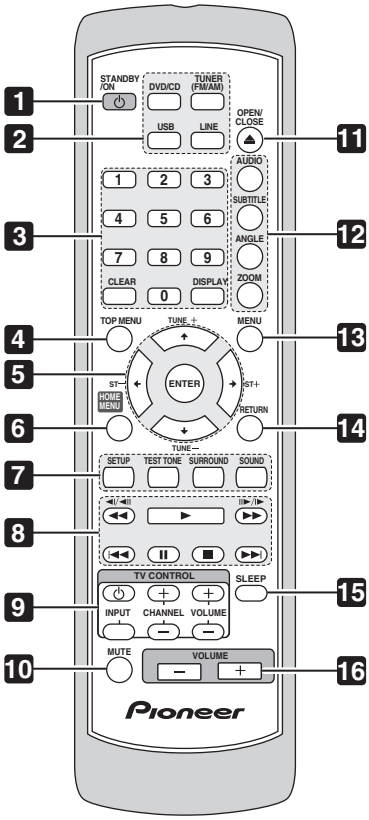
6 ⏻ STANDBY/ON
Switches the system on or into standby.

7 USB interface
Connect a USB device for playback (see *USB playback).*

8 PHONES jack
Connect headphones.

9 Display
See *Display* below.

Remote control



1 ⏻ STANDBY/ON
Switches the system on or into standby.

2 Function select buttons
Selects the source you want to listen to (**DVD/CD, TUNER, USB, LINE).**

3 Number buttons / CLEAR / DISPLAY

CLEAR
Clears an entry.

DISPLAY
Displays/changes disc information shown on-screen or to display RDS information.

4 TOP MENU
Displays the top menu of a DVD disc in the play position—this may be the same as pressing **MENU**.

5 Cursor buttons, ENTER and tuning buttons

Cursor buttons
Use the cursor buttons (⬆/⬇/⬅/➡) to navigate on-screen displays and menus.

ENTER
Selects an option or executes a command.

TUNE +/-
Tunes the radio.

ST +/-
Selects station presets when listening to the radio.

6 HOME MENU
Displays (or exits) the on-screen menu for Initial Settings, Play Mode functions, etc.

7 Setup and other sound controls

SETUP
Use to make various system and surround sound settings .

TEST TONE
Outputs the test tone (for speaker setup).

SURROUND
Selects a Surround mode or switches to stereo playback

SOUND
Accesses the sound menu to adjust the SFC Mode, bass and treble, etc.

8 Playback controls
See Basic playback controls, Disc playback features and USB playback for an explanation controls.

9 TV CONTROL buttons
These control Pioneer plasma displays.

10 MUTE
Mutes the sound (press again to cancel).

11 ⏏ OPEN/CLOSE
Opens/closes the disc tray.

12 DVD controls

AUDIO
Selects audio channel/language.

SUBTITLE
Displays/changes the subtitles.

ANGLE
Changes camera angle during DVD multi-angle scene playback.

ZOOM
Changes the screen zoom level.

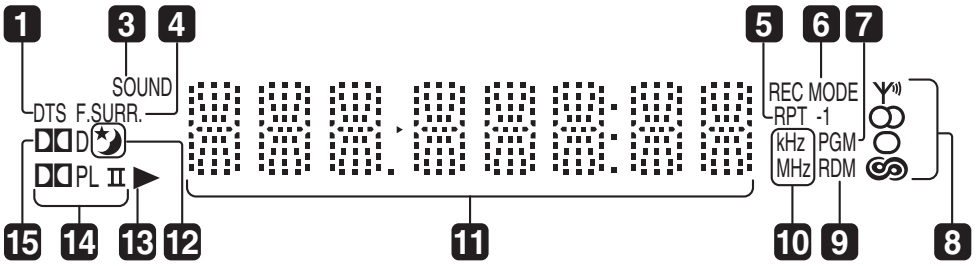
13 MENU
Press to display a DVD disc or USB menu, or the Navigator .

14 RETURN
Returns to a previous menu screen.

15 SLEEP
Press to set the sleep timer.

16 VOLUME +/-
Adjusts the volume.

Display



1 DTS
Lights during playback of a DTS source.

3 SOUND
Lights when the SFC Modes or the tone controls (treble, bass or bass boost) are active.

4 F.SURR (XV-DV353 model only)
Lights when the Front Surround listening mode is selected.

5 RPT and RPT-1
RPT lights during repeat play. **RPT-1** lights during repeat one-track play.

6 REC MODE
Lights when Rec Mode is on.

7 PGM
Lights during program play.

8 Tuner indicators
- Lights when a broadcast is being received.
- Lights when a stereo FM broadcast is being received in auto stereo mode.
- Lights when FM mono reception is selected.
- Lights when in one of the RDS display or search modes.

9 RDM
Lights during random play.

10 kHz / MHz
Indicates the frequency unit shown in the character display (**kHz** for AM, **MHz** for FM).

11 Character display

12
Lights when sleep timer is active.

13 ►
Lights during playback.

14 PL II
Lights during Dolby Pro Logic II decoding.

15 D
Lights during playback of a Dolby Digital source.

■ Jigs list

Name	Jig No.	Remarks
Service Remote Control Unit	GGF1381	adjustment, diagnosis
DVD Test Disc (DVD-Video)	GGV1025	Check of DVD-Video
CD Test Disc	STD-905	Check of CD
DVD Data Disc	GGV1269	ID data setting
Speaker Cable with terminal	SDS1174 (FL/WHITE) SDS1175 (FR/RED), SDS1176 (SL/BLUE) SDS1177 (SR/GRAY), SDS1178 (C/GREEN)	For checking audio at the SP terminal

■ Lubricants and Glues list

Name	Lubricants and Glues No.	Remarks
Lubricating Oil	GYA1001	refer to "2.3 06 LOADER ASSY"
Daifree	GEM1036	refer to "2.3 06 LOADER ASSY"
Silicone Adhesive	GEM1037	refer to "2.4 TRAVERSE MECHANISM ASSY-S"
Screw tight	GYL1001	refer to "6.5 MECHANISM ADJUSTMENT"

■ CLEANING

Before shipping out the product, be sure to clean the following positions by using the prescribed cleaning tools:

Position to be cleaned	Cleaning tools
Pickup leneses	Cleaning liquid : GEM1004 Cleaning paper : GED-008